Organoleptic Characteristics of Flavor Materials

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Orange essence oil HCF

Source: FMI
FEMA# 2826, CAS# 68606-94-0, *Citrus sinensis* L. Osbeck, natural
Odor: @ 100%. Waxy, aldehydic, slightly green and orange, with juicy notes.
Taste: @ 5 ppm. Sweet, orange, citrus, waxy, aldehydic and fruity.
Taste: @ 10 ppm. Orange, waxy, aldehydic, fruity and peely.
Possible applications: The hydrocarbon-free nature of this product makes it more water-soluble in beverage applications. Orange, fruit punch and citrus-blend flavors are all good targets for this material.

Cyclamen aldehyde (synonym: 2-methyl-3-(p-isopropylphenyl)propionaldehyde))

Source: Sigma Aldrich
FEMA# 2743, CAS# 103-95-7
Not yet found in nature.
Odor: @ 100%. Sweet, floral, fruity, fresh, green, waxy and melonlike.
Taste: @ 0.5 ppm. Floral, green, fruity, berrylike, waxy and melonlike.
Taste: @ 1 ppm. Green, floral, waxy, perfumy, fruity and melonlike.
Possible applications: Possible applications: A little of this high-impact material will go a long way in establishing fresh, green notes in watermelon, cantaloupe, honeydew and cucumber flavors. Its floral character will complement berry flavors like blueberry, raspberry, boysenberry and blackberry. Guava, apple, pear, dragon fruit and cilantro flavors are also good applications.

Isoamyl-2-methylbutyrate, natural

Source: Advanced Biotech
FEMA# 3505, CAS# 27625-35-0, natural
Natural occurrence: Apple, banana, cider, sherry, strawberry and tomato.
Odor: @ 100%. Fruity, winey, fermented and very slightly cheesy.
Taste: @ 5 ppm. Fruity, fermented, applelike and slightly winey.
Taste: @ 10 ppm. Fruity, slightly solventlike, waxy, fermented and winey.
Possible applications: This ester will add ripe notes to fruits like apple, pear, banana, plum, cherry and pineapple. Its fermented nature will reinforce the profile of alcoholic beverage flavors like cider, wine, brandy and rum.

Hexanal, natural

Source: Aromiens International
FEMA# 2557, CAS# 66-25-1, natural
Natural occurrence: Apple, banana, star fruit, orange juice, coconut, bread, butter and tomato.
Odor: @ 1%. Green, waxy, fresh, sweet, fruity and orange peel-like.
Taste: @ 1 ppm. Green, fruity, aldehydic and citruslike, with vegetable notes.
Taste: @ 2 ppm. Green, waxy, fruity and vegetablelike.
Possible applications: This very interesting chemical has at least a dual nature. On one side, its green, fruity notes will be very welcome in apple, pear, orange, tangerine, guava, kiwi, banana and strawberry flavors. On the other side, those same green notes will reinforce the fresh complex in cucumber, green pepper, tomato, tea, avocado, parsley, basil and cilantro flavors. Other areas where this contributes important notes at very low levels are butter, potato chip and cooked rice.

2-Octen-4-one, natural

Source: Natural Advantage
FEMA# 3603, CAS# 4643-27-0, natural
Natural occurrence: Wheat bread.
Odor: @ 1%. Pungent, earthy, green, fruity and wasabilike.
Taste: @ 1 ppm. Green, metallic, fruity, savory, vegetablelike and cruciferous, with a bite.
Taste: @ 2 ppm. Green, cruciferous, metallic and vegetable-like, with a bite.

Possible applications: At low levels, this material will add subtle, fresh, green character to fruits like pineapple, apple and strawberry. Higher levels will enhance mushroom, sour cream, tomato, olive oil, watercress, wasabi, horseradish and mustard flavors.

Pyrazine mixture 11, natural ABT# 1471

Source: Advanced Biotech

This product comprisesa proprietary mixture of natural FEMA and/or GRAS compounds as cited in 21 CFR 101.22 (a) (3).

Odor: @ 1%. Musty, cocoalike, nutty, earthy and coffeelike.

Taste: @ 2 ppm. Nutty, hazelnutlike and slightly oily.

Taste: @ 5 ppm. Nutty, musty, cocoalike and fatty.

Possible applications: Most nut flavors will benefit from this product's use, including hazelnut, pecan, peanut and almond. Coffee, cocoa and chocolate flavors are also good considerations. This can also be used as part of the baked note complex in bread and cookie-type flavors.

Pyrazine mixture, natural ABT# 1345

Source: Advanced Biotech

This product comprises a proprietary mixture of natural FEMA and/or GRAS compounds as cited in 21 CFR 101.22 (a) (3).

Odor: @ 1%. Nutty, musty, cocoalike, slightly hazelnutlike and slightly toasted.

Taste: @ 2 ppm. Earthy, musty and peanutlike.

Taste: @ 5 ppm. Nutty, earthy, musty and cocoalike.

Possible applications: This is another good material for use in nut flavors, especially peanut, walnut, almond and hazelnut. It will also add depth to chocolate, coffee, mocha, toffee, caramel and carob flavors. At levels below 2 ppm, it will add nuttiness to cheeses like Swiss and aged Parmesan.

Ethyl 3-hydroxybutyrate, natural

Source: Aromiens International

FEMA# 3428, CAS# 5405-41-4

Natural occurrence: Blackberry, grape, guava, passion fruit, mango, rum, wine and black tea.

Odor: @ 100%. Fruity, slightly green, fermented and winey.

Taste: @ 5 ppm. Fruity, musty and slightly winey.

Taste: @ 10 ppm. Fruity, musty, berrylike and winey.

Possible applications: Blue and purple types of berries like blackberry, blueberry, grape and boysenberry are good applications for this ester, which is also known as grape butyrate. Its winey notes will enhance apple and pear flavors as well as wine, cider and brandy. Other flavors where it will reinforce fruitiness are pineapple, mango, guava and passion fruit.

γ-Valerolactone, natural

Source: M & U

FEMA# 3103, CAS# 108-29-2, natural

Natural occurrence: Beer, cheese, coconut, hazelnut, milk, mushroom, soy and tomato.

Odor: @ 100%. Slightly acidic, sweet, coumarinic and tobaccolike.

Taste: @ 5 ppm. Mouthfeel and slightly nut skinlike with a latent sweetness.

Taste: @ 10 ppm. Mouthfeel, slightly coconutlike, nutty and oily.

Possible applications: This lactone will enhance coconut, vanilla and oily nut flavors like macadamia, pecan, cashew and almond flavors. Caramel, chocolate, maple, brown sugar, molasses, milk, graham cracker, clover honey and granola flavors are also good uses for it. Lastly, it will contribute to the character of tobacco, whiskey, rum, brandy and Maiwein flavors.

2-Acetyl-3-ethylpyrazine

Source: Sigma-Aldrich

FEMA# 3250, CAS# 32974-92-8

Natural occurrence: Cocoa and cooked pork.

Odor: @ 1%. Musty, nutty, earthy and raw potatolike, with a hint of toast.

Taste: @ 5 ppm. Nutty, musty and potatolike, with a bread crust note.

Taste: @ 10 ppm. Musty, earthy, nutty and potatolike.

Possible applications: This particular pyrazine lacks the toasted corn notes of its cousin, 2-acetyl pyrazine. Its earthy, musty notes make it a more appropriate ingredient in potato, coffee, cocoa, nut, radish, sprouts and green vegetable flavors. At low levels, it will contribute to the baked quality of bread, cookies, pie crust and the like.