

Organoleptic Characteristics of Flavor Materials

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Organoleptic Evaluation Panel

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- Carl Holmgren, Consulting Flavor Chemist
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- · Gerard Mosciano, Consulting Flavor Chemist
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9-Decen-2-one

Source: Treatt

FEMA# 4706, CAS# 35194-30-0 *Natural occurrence:* Pineapple.

Odor: @ 1%. Green, waxy, slightly metallic and fruity (pineapple, apple, pear).

Taste: @ 5 ppm. Green, waxy, fatty, oily, fruity and slightly pearlike. Taste: @ 10 ppm. Green, fruity, floral, fatty, oily, fruity with a cooling nuance.

Possible applications: This recently FEMA-approved material will lend heavier fruity, green notes to fruit flavors, especially pineapple, apple, pear, quince, melon, kiwi and banana. Its fatty, green quality will also blend well in vegetable and herbal flavors like cucumber, carrot, celery and cilantro.

➤Treatt; www.treatt.com

3-Hydroxy-3-methyl-2,4-nonanedione (synonym: lactadione)

Source: Treatt

FEMA# 4687, CAS# 544409-58-7 Natural occurrence: Tea, green tea.

Odor: @ 100%. Cultured, creamy, dairylike, waxy, sweet and

Taste: @ 2 ppm. Green, fatty, slightly leafy and fatty.

Taste: @ 5 ppm. Green, creamy, dairylike and astringent.

Possible applications: At lower levels, this compound will be beneficial in tea-type flavors to enhance the leafy notes as well as herbal flavors like celery and caraway. When used at higher dosages, lactadione will help to reinforce creamy notes in dairy flavors like milk, custard, butter, cream, sour cream, cream cheese, yogurt and gjetost, as well as in sweet brown flavors including caramel, toffee, butterscotch and cajeta.

➤Treatt; www.treatt.com

5-Methyl-2-thiophenecarboxaldehyde (synonym: bread thiophene)

Source: Treatt

FEMA# 3209, CAS# 13679-70-4

Natural occurrence: Bread, beef, chicken, coffee, cognac, peanut, popcorn, fried potato, cooked shrimp, tobacco, tomato, malt whiskey.

Odor: @ 1%. Sweet, bitter almondish and cherrylike with a nutty nuance.

Taste: @ 0.5 ppm. Bitter almondish and cherrylike with a hint of vanilla.

Taste: @ 1 ppm. Bitter almondish, cherrylike, sweet, slightly brown, slightly nutty with a vanilla undertone.

Possible applications: One would expect something reeking of sulfur by its name. Much to the contrary, this very pleasant-smelling material will grace all bitter almond and cherry-type flavors including Dr. Pepper-type cola, red licorice and raspberry. Nut flavors like pistachio and peanut are also good applications for its use as well as brown flavors like chocolate, vanilla, whiskey and coffee.

➤Treatt; www.treatt.com

Ethyl 3-(methylthio)butyrate (synonym: tropical 3-thiobutyrate)

Source: Treatt

FEMA# 3836, CAS# 233665-96-8 *Natural occurrence:* Not yet found.

Odor: @ 1%. Sweet, alliaceous, fruity and fermented.

Taste: @ 2 ppm. Fruity, sweet, overripe, rotten fruitlike and slightly gassy.

Taste: @4ppm. Sweet, fruity, overripe with onion/garlic overtones. Possible applications: As its synonym intimates, this compound can be used to complement ripe, tropical notes in durian, rambutan, dragon fruit, carambola and pineapple. It can also enhance the subtle sulfurous notes in Concord grape, strawberry, raspberry and cantaloupe. At higher dosages, it will benefit savory flavors like garlic, onion, leek and the like. It should also be considered as part of the fruity complex in aged hard cheeses like Parmesan, Grana Padano and gouda.

➤Treatt; www.treatt.com

KanTone^a 70, Turmeric Oleoresin

Source: Kancor Ingredients FEMA# 3087, CAS# 84775-52-0

Natural

Odor: @ 100%. Warm, spicy, cedarlike, woody and earthy.

Taste: @ 2 ppm. Black pepperlike, spicy and earthy with a vegetable nuance.

Taste: @ 5 ppm. Spicy, black pepperlike, cedarlike, woody and earthy.

Possible applications: This golden yellow turmeric extraction touts 71% turmerones, which are reported to have powerful antioxidant qualities. Its profile will add depth and interest to spices like anise, ginger, pepper, cinnamon, cassia, nutmeg and combinations thereof. Of course, it's a natural for all types of Asian and African spice blends.

➤Kancor Ingredients Ltd.; www.kancorflavours.com

n-Methyl-2-formylpyrrole (synonym: 1-Methyl-1H-pyrrole-2-carboxaldehyde)

Source: Treatt

FEMA# 4332, CAS# 1192-58-1

Natural occurrence: Bacon, coffee, asparagus, mate, white wine, cocoa, malt, beef, bread, hazelnut, popcorn.

Odor: @ 1%. Sweet, bitter almondlike, nutty, haylike, slightly brown with a chemical undertone.

Taste: @ 1 ppm. Solventlike, nutty and slightly tarry.

Taste: @ 3 ppm. Nutty, astringent, sweet, brown with a hint of a chemical note.

Possible applications: The sweet, nutty profile of this material will enlarge the benzaldehyde effect in flavors that depend on it for its character like cherry, bitter almond and pistachio. Other flavors where it can be applied to flesh out profile notes are vanilla, licorice, tarragon, nuts, chocolate and some meat flavors.

➤Treatt; www.treatt.com

2(3),5-Dimethyl-6,7-dihydro-5H-cyclopentapyrazine

Source: Treatt

FEMA# 4702, CAS# 38917-61-2 Natural occurrence: Coffee, pork.

Odor: @ 1%. Nutty, toasted, sweet, cocoalike, brown with an earthy nuance.

 $\it Taste: @ 1 \ ppm. \ Nutty, \ toasted, \ musty, \ cocoa \ and \ coffeelike.$

Taste: @ 2 ppm. Nutty, roasted, brown, cocoa and coffeelike with an undertone of peanut butter.

Possible applications: This lovely pyrazine can fit into almost any brown flavor, especially the sweets like caramel, butterscotch, cocoa, chocolate, mocha, toffee. It will shine in nut flavors like hazelnut and in combination with chocolate, peanut and peanut butter. Popcorn, caramel corn, sweet coffee, sesame seed, roast pork and chicken flavors are also really good applications.

➤Treatt; www.treatt.com

1-(2-FurfuryIthio)-propanone

Source: Treatt

FEMA# 4676, CAS# 58066-86-7

Not yet found in nature

Odor: @ 1%. Roasted, meaty, alliaceous, coffeelike, burnt and slightly fatty.

Taste: @ 0.5 ppm. Meaty, savory, onionlike and fatty.

Taste: @ 1 ppm. Meaty, onionlike, coffeelike and roasted.

Possible applications: This powerful chemical will reinforce roast meat notes in gravy, beef, pork, chicken and other savory flavors, including fat replacements. At very low levels (< 0.5 ppm), it can be used to broaden the profile of onion, garlic and other alliaceous flavors and perhaps coffee as well.

➤Treatt; www.treatt.com

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^a KanTone is a trade name of Kancor Ingredients Ltd.