

# Organoleptic Characteristics of Flavor Materials

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## **Organoleptic Evaluation Panelists**

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- Cyndie Lipka, Senior Flavorist, Prinova Flavors
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- Deborah Barber, Senior Scientist, Kraft Foods
- Carl Holmgren, Consulting Flavor Chemist
- Tom Gibson, Creative Director, Silesia Flavors

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## Tamarind solid extract, GMO-free, ref: AJ621685

#### Source: Naturex

GRAS, CAS# 84961-62-6, natural, Tamarindus indica L.

*Odor*: @ 100%. Brown, herbal, sweet, slightly maplelike and raisinlike, with a slight citrus note.

Taste: @ 0.1%. Fruity, astringent, tart and brown.

*Taste*: @ 0.2%. Tart, fruity, astringent, brown and slightly musty. *Possible applications*: Because of its acidic nature, this material

can be used as a natural acidifier in fruit flavors. It will benefit flavors in which tamarind is traditionally used, including Worcestershire, barbeque and steak sauce, as well as raisin, peach, apricot, prune, plum sauce, molasses and fruit punch.

## Natural cocoa extract, item: U1-0016483.VP10

Source: Kerry Ingredients & Flavours

GRAS, CAS# 84649-99-0, natural, Theobroma cacao L.

*Odor:* @ 100%. Cocoa, dark chocolate, slightly tobaccolike, sweet and warm.

Taste: @ 0.02%. Brown and cocoa.

Taste: @ 0.05%. Cocoa, dark chocolate, sweet and rich.

*Possible applications:* The very true nature of this product makes it an excellent addition to all chocolate flavors, especially of the dark ilk. Mocha, mole and other chocolate combination flavors are also great targets for its use.

## 2-Mercaptoanisole (synonym: 2-methoxythiophenol)

Source: Sigma Aldrich

FEMA# 4159, CAS# 7217-59-6

Not yet found in nature.

*Odor:* @ 1%. Gassy, meaty, sulfurous, savory, fishy and phenolic, with a hint of wintergreen.

- *Taste:* @ 0.5 ppm. Savory, meaty, fishy, sulfurous, alliaceous and slightly clovelike.
- *Taste:* @ 0.1 ppm. Savory, bloody, meaty, fishy, sulfurous and clovelike.
- *Possible applications:* Savory flavors are the obvious choice for this very potent component. At very low levels, seafood flavors like shrimp, clams, scallops and fish will be enhanced, while at higher levels it will add to the cured complex of meats like jerky, bacon, ham and sausage. Other areas to consider are soup, sauce and au jus flavors.

## Nutmeg oleoresin

#### Source: Ventos

GRAS, CAS# 8008-45-5, natural, Myristica fragrans Houtt.

*Odor:* @ 100%. Sweet, spicy, terpeney, woody, slightly peppery and slightly green, with a creamy undertone.

*Taste:* @ 2 ppm. Sweet, spicy and terpeney, with a tingling effect. *Taste:* @ 5 ppm. Sweet, spicy and terpeney, with a tingling effect.

*Possible applications:* This highly characteristic product will be very useful in sweet spice flavors and blends, but even more so in rum, gin, custard, egg nog, root beer, cola and pepper flavors.

## Jasmine absolute

Source: Ventos

- FEMA# 2598, CAS# 84776-64-7, natural, Jasminum grandiflorum L.
- *Odor:* @1%. Sweet, floral, bright, perfumy, pungent and aromatic. *Taste:* @1 ppm. Floral and slightly fruity.

Taste: @ 2 ppm. Perfumy, floral, waxy and slightly soapy.

*Possible applications:* Just a touch of jasmine will bring a rich, fruity depth to many fruit flavors like peach, green banana, strawberry, honeydew, raspberry apricot, pear, apple and muskmelon. It's a must in jasmine tea.

## **Spearmint oil HCF**

Source: FMI (Flavor Materials International)

FEMA# 3032, CAS# 8008-79-5, natural,  $Mentha\ spicata\$ L.

Odor: @ 100%. Fresh, spearmint, leafy, sweet and clean.

*Taste:* @ 10 ppm. Fresh, slightly cooling and mildly tingling, with a hint of spearmint.

*Taste:* @ 20 ppm. Leafy, herbal, fresh, cooling, green and minty. *Possible applications:* When used at low levels, the unusual notes of this spearmint oil will add fresh notes to raspberry, strawberry, blackberry, melon, peach and passion fruit, and green vegetables like cucumber and lettuce. At higher dosages, it will shine in alcohol flavors like gin and mojito. Of course, it can, and should, be used in mint flavors, too.

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### Genet absolute (synonym: broom absolute)

Source: Robertet

FEMA#2504, CAS#90131-21-8, natural, *Spartium junceum* L. *Odor:* @ 100%. Sweet, brown, herbal, haylike, slightly floral,

musty and tealike.

*Taste:* @ 3 ppm. Haylike, tobaccolike and slightly brown.

*Taste:* @6ppm. Sweet, astringent, haylike, tobaccolike and tealike. *Possible applications:* Brown flavors like tea and tobacco are

good vehicles for this material. Other flavors where its brown notes will add interest are vanilla, root beer, anise, marshmallow, and fruits like grape, peach and strawberry.

#### Sage Dalmatian essential oil

Source: Elixens

FEMA# 3001, CAS# 8022-56-8, natural, Salvia officinalis L.

Odor: @ 100%. Aromatic, herbal, fresh, green, cooling, euca-lyptuslike and oily.

Taste: @ 1 ppm. Herbal, green, minty, cooling and numbing.

Taste: @ 2 ppm. Herbal, green, cooling, spicy and numbing.

*Possible applications:* Herbal blends for poultry and sausage come immediately to mind for this essential oil. Beyond that, it can add fresh notes to mint, peach, kiwi, passion fruit, mango and guava. A hint in herbal liqueur flavors will add a touch of trigeminal mystery.

#### Natural pyrazine mixture #24

Source: Excellentia

FEMA# 3149, CAS# 13925-07-0; FEMA# 3150, CAS# 13360-65-1; FEMA# 4434, CAS# 15707-34-3 *Natural occurrence:* Cocoa, coffee, nuts, whiskey, rum, potato, popcorn and/or peanuts.

Odor: @ 1%. Musty, dirty, earthy, peanutlike and raw nutlike.

Taste: @ 0.5 ppm. Musty, nutty, rooty and potatolike.

*Taste:* @ 1 ppm. Musty, peanutlike, earthy, nutty and raw legumelike.

*Possible applications:* The earthy profile of this complex will reinforce those notes in peanut, tree nut, coffee and cocoa flavors, albeit at very low levels. It will also contribute a raw earthy quality to vegetable flavors like green pepper, broccoli, cauliflower, peas, celery and lettuce.

#### 4-Mercapto-4-methyl-2-pentanone

Source: Charkit Chemical Corp.

FEMA# 3997, CAS# 19872-52-7

Natural occurrence: Grapefruit, yuzu and white wine.

*Odor:* @ 0.01%. Catty, black currantlike, tropical, sulfurous and slightly alliaceous.

Taste: @ 0.005 ppm. Tropical, sulfurous and slightly metallic.

- *Taste:* @ 0.01 ppm. Slightly alliaceous, catty, tropical, black currantlike and savory.
- *Possible applications:* This very powerful chemical will add a tropical, catty character to mango, passion fruit, papaya, guava, durian and guanabana, and enhance dark and berry notes in Concord grape, black currant and blackberry. Its use will also help complete the distinctive flavor profiles of white grape and white wines, especially of the sauvignon blanc type.

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