



Organoleptic Characteristics of Flavor Materials

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Natural occurrence information is from Leffingwell & Associates. Suppliers of most materials found in this report can be located in *Allured's Flavor & Fragrance Materials*, published in print and online by Allured Business Media. Learn more at: www.perfumerflavorist.com/ffm.

Suppliers: Suggest materials for evaluation to Judith Michalski; jmichalski@bellff.com.

γ -Butyrolactone, Natural

Source: Wen International
FEMA# 3291, CAS# 96-48-0

Natural occurrence: Beer, coffee, guava, spike lavender, mango and white wine.

Odor: @ 100%. Waxy, oily, slight solvent note, buttery, slightly haylike and musty.

Taste: @ 10 ppm. Fatty, creamy, milky and sautéed butterlike.

Taste: @ 20 ppm. Creamy, nut oil-like, fatty and slightly cream coconutlike.

Possible applications: This material will enhance butter flavors of the melted and sautéed types as well as butterscotch and caramel, milk, cream and their cooked derivatives such as dulce de leche, condensed milk, cajeta and clotted cream. Oily notes in nuts can also be reinforced by the use of this material, especially in macadamia, pecan, walnut and Brazil nuts.

►Wen International; www.weninternational.com

γ -Heptalactone, Natural

Source: Wen International
FEMA# 2539, CAS# 105-21-5

Odor: @ 100%. Sweet, slightly floral, creamy, coconutlike and oily.

Taste: @ 5 ppm. Milky, creamy and coconut/coumarinlike.

Taste: @ 10 ppm. Creamy, oily, milky and coconut/coumarinlike.

Possible applications: At low dosages this material will reinforce fresh milk and cream notes in dairy flavors as mentioned, as well as yogurt, sour cream and mold-ripened cheese such as brie, blue and gorgonzola. It will also add depth and sweetness to chocolate, nut, vanilla and coconut flavors as well as tropical fruits.

►Wen International; www.weninternational.com

δ -Nonalactone, Natural

Source: Wen International
FEMA# 3356, CAS# 3301-94-8

Natural occurrence: Asparagus, beef, beer, butter, chicken fat, rum, whiskey and wine.

Odor: @ 100%. Waxy, coconut, sweet, nutty and creamy.

Taste: @ 5 ppm. Waxy, creamy, coconutlike, melted butterlike and fruity.

Taste: @ 10 ppm. Creamy, oily, melted butterlike, milky and fruity with a hint of beef.

Possible applications: At lower levels δ -nonalactone will enhance nut, coconut, vanilla and sweet brown flavors such as caramel, butterscotch, maple, and chocolate. It will also add body to fruit flavors such as pineapple, peach, apricot and so on. Where it can really shine at higher dosages is in dairy flavors, particularly those treated with heat, like condensed milk, melted butter, clotted cream, and also animal fat flavors, especially schmaltz, tallow and lard.

►Wen International; www.weninternational.com

γ -Nonalactone, Natural (aka Aldehyde C-18)

Source: Wen International

FEMA# 2781, CAS# 104-61-0

Natural occurrence: Apricot, wheat bread, black currant, ham, osmanthus, papaya, tea and mushroom.

Odor: @ 100%. Waxy, oily, smoky and creamy with coconut nuances.

Taste: @ 5 ppm. Creamy, waxy, milky, coconut, dairylike and fruity.

Taste: @ 10 ppm. Creamy, waxy, coconut, sweet, fruity with dairy undertones.

Possible applications: Although not as dairylike as its δ -sibling, γ -nonalactone will nonetheless find use in those flavors. Other flavors where it will be more beneficial are in fruits such as peach, apricot, papaya, mango, coconut and banana, and in meats like ham and bacon.

► **Wen International;** www.weninternational.com

γ -Octalactone, Natural

Source: Wen International

FEMA# 2796, CAS# 104-50-7

Natural occurrence: Apricot, beer, chicken, cognac, sherry, strawberry, raspberry, blue cheese, roasted pecans, hazelnuts and peanuts.

Odor: @ 100%. Sweet, creamy, coconut, waxy and coumarinic with dairy undertones.

Taste: @ 5 ppm. Creamy, milky, waxy, slightly bitter and coconutlike.

Taste: @ 10 ppm. Creamy, coconut, fatty and dairylike.

Possible applications: The fatty, coconutlike notes of this material are a welcome addition to coconut, chocolate and vanilla flavors. At more subtle levels it will add depth to dairy flavors including cream, milk, cheese, cream cheese, butter, butterscotch and caramel, and at the lower levels it will also reinforce rich, fatty notes in nuts.

► **Wen International;** www.weninternational.com

Premium Chicory Extract 15329

Source: Horner International

GRAS, CAS# 68650-43-1

Natural

Odor: @ 100%. Brown, roasted, woody, molasseslike and sweet with a hint of a savory, soy saucelike note.

Taste: @ 0.05%. Brown, bitter and caramellic.

Taste: @ 0.10%. Caramellic, bitter, roasted and woody.

Possible applications: This is a material that is traditionally used in enhancing and extending coffee flavor, but it can also be put to good use in other brown-type flavors such as caramel, cocoa, brown sugar and molasses, as well as savory considerations including soy sauce, BBQ and Worcestershire.

► **Horner International;** www.hornerinternational.com

Premium Cocoa Extract 3009

Source: Horner International

GRAS, CAS# 84649-99-0

Natural

Odor: @ 100%. Dark chocolatelike, cocoa powderlike, rich and slightly woody with a tobaccolike nuance.

Taste: @ 0.05%. Dark chocolatelike, cocoa powderlike, nibby, slightly bitter and astringent.

Taste: @ 0.10%. Acidic, dark chocolatelike, cocoa powderlike and sweet.

Possible applications: This is a very nice product to emphasize character notes in all chocolate flavors, especially of the darker persuasion including devil's food, mocha and brownie. It may also be used at lower levels to lend depth to dried fruit flavors such as fig, raisin and date.

► **Horner International;** www.hornerinternational.com

Premium Espresso Coffee Extract 15532

Source: Horner International

GRAS, CAS# 84650-00-0

Odor: @ 100%. Roasted, smoky, ashy, sweet, coffeelike and slightly meaty.

Taste: @ 0.05%. Sweet, brown, slightly meaty, smoky, roasted and coffeelike.

Taste: @ 0.10%. Coffeelike, bitter, roasted, ashy and brown, with smoky undertones.

Possible applications: This material is an obvious choice for coffee flavors and its permutations. It will also multitask in other brown flavors such as maple, chocolate, toffee and caramel, as well as provide roasted notes in cereal, meat and especially bacon and other smoked meat flavors.

► **Horner International;** www.hornerinternational.com

δ-Undecalactone, Natural

Source: Wen International

FEMA# 3294, CAS# 710-04-3

Natural occurrence: Blackberry, heated butter, cream, milk and coconut.

Odor: @ 100%. Soft, fatty, peach/apricotlike and sweet with a hint of cooked butter.

Taste: @ 5 ppm. Oily, creamy, peachy, fruity and dairylike.

Taste: @ 10 ppm. Peach/apricotlike, creamy, dairylike and fatty.

Possible applications: This ambidextrous material will contribute to both fruit and dairy flavors. When used in fruits, its apricot/peach core will lend non-ester fruitiness and depth to the aforementioned flavors as well as to berries, papaya, mango, banana and so on. In dairy flavors it will complement the sulfurous, peachy notes in aged cheddars and reinforce rich, fatty notes in melted butter (ghee), cream, milk, sour cream and its ilk.

► **Wen International;** www.weninternational.com