



# Organoleptic Characteristics of Flavor Materials

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## Organoleptic Evaluation Panel

- Judith Michalski
- Tom Gibson, Creative Director, Silesia Flavors
- Carl Holmgren, Consulting Flavor Chemist
- Cyndie Lipka, Senior Flavorist, Bell Flavors & Fragrances
- Gerard Mosciano, Consulting Flavor Chemist
- Robert Pan, Senior Flavorist, Bell Flavors & Fragrances
- Deborah Barber, Senior Scientist, Kraft Foods

## Hazeltone natural, 1% in ethanol (synonym: 5-methyl-(E)-2-hepten-4-one)

Source: Natural Advantage  
FEMA# 3761, CAS# 81925-81-7

Natural

**Odor:** @ 1%. Metallic, green, slightly roasted, nutty and hazelnutlike.

**Taste:** @ 0.5 ppm. Metallic, nutty, hazelnut and green.

**Taste:** @ 1 ppm. Metallic, green, nutty, hazelnut, roasted, earthy and oily.

**Possible applications:** This powerful chemical is the characterizing component for hazelnut. Simply put: without it, hazelnut isn't hazelnut. Pecan flavors will also benefit from its use, albeit at levels well under 0.5 ppm as well as coffee, cocoa, chocolate and roasted chicken skin.

► **Natural Advantage;** [www.natural-advantage.net](http://www.natural-advantage.net)

## Plum extract

Source: Axxence  
GRAS, CAS# 90082-87-4

Natural

**Odor:** @ 100%. Sweet, fruity, brown and dried fruitlike.

**Taste:** @ 0.1%. Sweet, fruity, brown and dried fruitlike.

**Possible applications:** The rich fruitiness of this product will come through very nicely in dried fruit flavors like raisin, prune and tamarind. Other fruit flavors where it will add "heart" are cherry, apricot, red berry and, of course, plum. It should also be considered for use in BBQ and oriental sauce flavors like hoisin to add fruitiness and depth.

► **Axxence;** [www.axxence.de](http://www.axxence.de)

## Chocotella Super #1 ABT# 1228, natural (synonym: 2-ethyl-3-methylpyrazine)

Source: Advanced Biotech  
FEMA# 3155, CAS# 15707-23-0

**Natural occurrence:** Barley, beef, cocoa, coffee, hazelnut, peanut, shrimp, soy.

**Odor:** @ 100%. Initial hint of shellfish, musty, nutty, chocolate and roasted.

**Taste:** @ 40 ppm. Nutty, cocoa and dark chocolate-like.

**Taste:** @ 60 ppm. Cocoa and dark chocolate-like, nutty and brown.

**Possible applications:** This product has a nice roasted note which is generally lacking in the flavorists' natural arsenal to date. Its use will establish roasted notes in all nuts, cocoa, coffee, meats as well as emphasize baked notes in flavors like cereal, graham cracker, cake, cookie, etc.

► **Advanced Biotech;** [www.adv-bio.com](http://www.adv-bio.com)

## Propyl 2-mercaptopropionate

Source: Treatt  
FEMA# 4207, CAS# 19788-50-2

**Natural occurrence:** Not yet found in nature.

**Odor:** @ 0.1%. Meaty, beefy, sulfurous, alliaceous, cruciferous and metallic with a tropical nuance.

**Taste:** @ 0.1 ppm. Brothy, savory, sulfurous and meaty.

**Taste:** @ 0.2 ppm. Green onionlike, sulfurous, alliaceous and beefy with a hint of coffee.

**Possible applications:** The savory, meaty character of this material makes it a good fit for meat flavors, especially beef and pork. Its alliaceous notes will enhance onion, garlic, shallot, leek and the like as well as add depth to coffee-type flavors. At very low levels, it can round out sulfur notes in tropical fruits like durian and grapefruit.

► **Treatt;** [www.treatt.com](http://www.treatt.com)

## 3-(Methylthio)propyl mercaptoacetate

Source: Treatt  
FEMA# 4561, CAS# 852997-30-9

**Natural occurrence:** Not yet found in nature.

**Odor:** @ 1%. Meaty, beefy, mushroomlike, earthy, alliaceous, roasted and savory.

**Taste:** @ 2 ppm. Beefy, savory, brothy, roasted and metallic.

**Taste:** @ 5 ppm. Meaty, beefy, bloody, roasted, brothy, *au jus*-like and savory.

*Possible applications:* This product will be valuable for use in savory flavors. Its roasted, meaty character will reinforce those notes in beef, pork, and chicken flavors and will also lend depth to fat-type flavors like tallow and lard. Other flavors which will benefit from its use are soy sauce, mushroom, caramelized onions, roasted garlic, kimchee and grill-type flavors.

► **Treatt;** [www.treatt.com](http://www.treatt.com)

fermented such as cultured (European) butter, yogurt, sour cream, crème fraîche, buttermilk, kefir and quark. Fresh cheese flavors like mozzarella and queso fresco and those that are lightly cultured like ricotta, farmers, cream and cottage are also good targets for this material.

► **Treatt;** [www.treatt.com](http://www.treatt.com)

## **Apple Essence 2500 fold, Cider Type 23125**

*Source:* Cvista

GRAS, Natural

*Odor:* @ 100%. Fruity, juicy, winey, sweet, brown, fermented and slightly cooked.

*Taste:* @ 0.05%. Sweet, brown, fermented, green, apple saucelike and slightly waxy.

*Possible applications:* This very characteristic material will complement all apple flavors, especially those intended for cooked applications like oatmeal and fillings. Other good applications are pear and quince flavors.

► **Cvista;** [www.cvista.com](http://www.cvista.com)

## **Apple Essence 2500-fold, GS Type 22125**

*Source:* Cvista

GRAS, Natural

*Odor:* @ 100%. Sweet, estery, fresh, ripe, green and slightly fusel-like.

*Taste:* @ 0.05 %. Sweet, fresh, green, ripe, pulpy and slightly waxy.

*Possible applications:* A very characteristic essence, this product will find use primarily in apple flavors for beverage applications. It will also lend sweet, fresh, green, *trans*-2-hexenal type notes to pear, quince and berry flavors like strawberry.

► **Cvista;** [www.cvista.com](http://www.cvista.com)

## **2-Acetoxy-3-butanone (synonym: acetoin acetate)**

*Source:* Treatt

FEMA# 3526, CAS# 4906-24-5

*Natural occurrence:* Wine, cocoa, roasted chicken, pawpaw, pineapple.

*Odor:* @ 100%. Ethereal, buttery, creamy, dairylike and fermented.

*Taste:* @ 30 ppm. Buttery, creamy, milky and dairylike.

*Taste:* @ 50 ppm. Dairylike, sweet, creamy and cultured.

*Possible applications:* The predominating dairy notes of this compound will reinforce the character notes of most dairy flavors, but especially those which are

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