# **List of Food Additives**

# List of food additive types

Food additives can be divided into several groups, although there is some overlap between them. They are all listed below.

#### Acids

Food acids are added to make flavors "sharper", and also act as preservatives and antioxidants. Common food acids include vinegar, citric acid, tartaric acid, malic acid, fumaric acid, and lactic acid.

Acidity regulators

Acidity regulators are used to change or otherwise control the acidity and alkalinity of foods.

# Anticaking agents

Agents keep powders such as milk powder from caking or sticking.

Antifoaming agents reduce or prevent foaming in foods.

#### **Antioxidants**

Antioxidants such as vitamin C act as preservatives by inhibiting the effects of oxygen on food, and can be beneficial to health.

# Bulking agents

Bulking agents such as starch are additives that increase the bulk of a food without affecting its nutritional value. Food coloring

Colorings are added to food to replace colors lost during preparation, or to make food look more attractive.

# Color retention agents

In contrast to colorings, color retention agents are used to preserve a food's existing color.

## **Emulsifiers**

Emulsifiers allow water and oils to remain mixed together in an emulsion, as in mayonnaise, ice cream, and homogenized milk.

### **Flavors**

Flavors are additives that give food a particular taste or smell, and may be derived from natural ingredients or created artificially.

#### Flavor enhancers

Flavor enhancers enhance a food's existing flavors. They may be extracted from natural sources (through distillation, solvent extraction, maceration, among other methods) or created artificially.

## Flour treatment agents

Flour treatment agents are added to flour to improve its color or its use in baking.

# Glazing agents

Glazing agents provide a shiny appearance or protective coating to foods.

#### Humectants

Humectants prevent foods from drying out.

# Tracer gas

Tracer gas allow for package integrity testing to prevent foods from being exposed to atmosphere, thus guaranteeing shelf life.

### Preservatives

Preservatives prevent or inhibit spoilage of food due to fungi, bacteria and other microorganisms.

Stabilizers

Stabilizers, thickeners and gelling agents, like agar or pectin (used in jam for example) give foods a firmer texture. While they are not true emulsifiers, they help to stabilize emulsions.

#### Sweeteners

Sweeteners are added to foods for flavoring. Sweeteners other than sugar are added to keep the food energy (calories) low, or because they have beneficial effects for diabetes mellitus and tooth decay and diarrhea.

#### **Thickeners**

Thickeners are substances which, when added to the mixture, increase its viscosity without substantially modifying its other properties.

Caffeine and other GRAS (generally recognized as safe) additives such as sugar and salt are not required to go through the regulation process.

# **Alphabetical Index of Food Additives**

## A

- Abietic acid -
- Acacia vera -
- Acacia -
- Acesulfame potassium artificial sweetener
- Acesulfame -
- Acetic acid acidity regulator
- Acetic acid esters of mono and diglycerides of fatty acids emulsifier
- Acetylated distarch adipate thickener, vegetable gum
- Acetylated distarch phosphate thickener, vegetable gum

- Acetylated oxidised starch thickener, vegetable gum
  - Acetylated starch thickener, vegetable gum
  - Acid treated starch thickener, vegetable gum
  - Adipic acid food acid
- Agar thickener, vegetable gum, stabilizer, gelling agent
  - Alfalfa -
- Alginic acid thickener, vegetable gum, stabilizer, gelling agent, emulsifier
  - Alitame artificial sweetener
  - Alkaline treated starch thickener, vegetable gum
  - Alkanet color (red)
  - Allspice -
  - Allura red AC color (FDA: FD&C Red #40)
- Almond oil used as a substitute for olive oil. Also used as an emollient.
  - Aluminium color (silver)
  - Aluminium ammonium sulfate mineral salt
  - Aluminium potassium sulfate mineral salt
  - Aluminium silicate anti-caking agent
  - Aluminium sodium sulfate mineral salt
  - Aluminium sulfate mineral salt
- Amaranth color (red) (FDA: [DELISTED] Red #2) Note that amaranth dye is unrelated to the amaranth plant
- Amaranth oil high in squalene and unsaturated fatty acids used in food and cosmetic industries.
  - Amchur (mango powder)
  - Ammonium acetate preservative, acidity regulator
  - Ammonium adipates acidity regulator
- Ammonium alginate thickener, vegetable gum, stabilizer, gelling agent, emulsifier
  - Ammonium bicarbonate mineral salt
  - Ammonium carbonate mineral salt
  - Ammonium chloride mineral salt
  - Ammonium ferric citrate food acid
  - Ammonium fumarate food acid

- Ammonium hydroxide mineral salt
- Ammonium lactate food acid
- Ammonium malate food acid
- Ammonium phosphates mineral salt
- Ammonium phosphatides emulsifier
- Ammonium polyphosphates anti-caking agent
- Ammonium sulfate mineral salt, improving agent
- Amylases flour treatment agent
- Angelica (Angelica archangelica)
- Anise -
- Annatto color
- Anthocyanins color
- Apricot oil a cooking oil from certain cultivars.
- Arabinogalactan thickener, vegetable gum
- Argan oil a food oil from Morocco that has also attracted recent attention in Europe.
  - Argon propellant
  - Rocket (Arugula)
  - Asafoetida -
- Ascorbic acid (Vitamin C) antioxidant (water soluble)
  - Ascorbyl palmitate antioxidant (fat soluble)
  - Ascorbyl stearate antioxidant (fat soluble)
  - Aspartame artificial sweetener
  - Astaxanthin color
- Avocado oil used a substitute for olive oil. Also used in cosmetics and skin care products.
- Azodicarbonamide flour bleaching agent. Also used in the production of foamed plastics and the manufacture of gaskets. Banned as a food additive in Australia and Europe.
  - Azorubine color (red) (FDA: Ext D&C Red #10)

#### B

- Babassu oil similar to, and used as a substitute for coconut oil.
- Baking powder leavening agent; includes acid and base

- Baking soda food base
- Balm, lemon -
- Balm oil -
- Balsam of Peru used in food and drink for flavoring
- Barberry -
- Barley flour -
- Basil (Ocimum basilicum) -
- Basil extract -
- Bay leaves -
- Beeswax glazing agent
- Beet red color (red)
- Beetroot red color (red)
- Ben oil extracted from the seeds of the moringa oleifera. High in behenic acid. Extremely stable edible oil. Also suitable for biofuel.
  - Bentonite anti-caking agent
  - Benzoic acid preservative
  - Benzoyl peroxide flour treatment agent
  - Berebere -
  - Bergamot in Earl Grey tea
  - Beta-apo-8'-carotenal (C 30) color
  - Beta-apo-8'-carotenic acid ethyl ester color
  - Betanin color (red)
  - Biphenyl preservative
  - Bison grass (*Hierochloe odorata*)
  - Bixin color
  - Black cardamom -
  - Black cumin -
- <u>Blackcurrant seed oil</u> used as a food supplement, because of high content of omega-3 and omega-6 fatty acids. Also used in cosmetics.
  - Black limes -
  - Pepper (black, white, and green) -
  - Black PN color (brown and black)
  - Bleached starch thickener, vegetable gum
  - Bolivian Coriander (*Porophyllum ruderale*) -
  - Bone phosphate anti-caking agent

- Borage (Borago officinalis) -
- Borage seed oil similar to blackcurrant seed oil used primarily medicinally.
  - Borax preservative
  - Boric acid preservative
  - Brilliant Black BN- color (brown and black)
  - Brilliant blue FCF color (FDA: FD&C Blue #1)
  - Brilliant Scarlet 4R color (FDA: Ext D&C Red #8)
  - Brominated vegetable oil emulsifier, stabiliser
  - Brown FK color (brown and black)
  - Bush tomato -
  - Butane propellant
- Butylated hydroxyanisole (BHA) antioxidant (fat soluble)
- Butylated hydroxytoluene (BHT) antioxidant (fat soluble)

### $\mathbf{C}$

- Cacao shell -
- Cachou extract -
- Cactus root extract -
- Cadinene -
- Caffeine stimulant
- Cajeput oil -
- Calamus -
- Calcium 5'-ribonucleotides flavor enhancer
- Calcium acetate preservative, acidity regulator
- Calcium alginate thickener, vegetable gum, stabilizer, gelling agent, emulsifier
  - Calcium ascorbate antioxidant (water soluble)
- Calcium alumino silicate (calcium aluminium silicate) anti-caking agent
  - Calcium ascorbate (Vitamin C)
  - Calcium benzoate preservative
  - <u>Calcium bisulfite preservative, antioxidant</u>
- <u>Calcium carbonates color (white), anticaking agent,</u> stabiliser

- Calcium chloride mineral salt
- Calcium citrates food acid, firming agent
- Calcium diglutamate flavor enhancer
- Calcium disodium EDTA preservative
- Calcium ferrocyanide anti-caking agent
- <u>Calcium formate preservative</u>
- Calcium fumarate food acid
- Calcium gluconate acidity regulator
- Calcium guanylate flavor enhancer
- Calcium hydrogen sulfite preservative, antioxidant
- Calcium hydroxide mineral salt
- Calcium inosinate flavor enhancer
- Calcium lactate food acid
- Calcium lactobionate stabilizer
- Calcium malates food acid
- Calcium oxide mineral salt
- Calcium pantothenate (Vitamin B<sub>5</sub>)
- Calcium peroxide -
- Calcium phosphates mineral salt, anti-caking agent,

# firming agent

- Calcium polyphosphates anti-caking agent
- Calcium propionate preservative
- Calcium salts of fatty acids emulsifier, stabiliser, anti-caking agent
  - Calcium silicate anti-caking agent
  - Calcium sorbate preservative
  - Calcium stearoyl lactylate emulsifier
- <u>Calcium sulfate flour treatment agent, mineral salt, sequestrant, improving agent, firming agent</u>
  - Calcium sulfite preservative, antioxidant
  - Calcium tartrate food acid, emulsifier
  - Camomile -
  - Candelilla wax glazing agent
  - Candle nut -
- <u>Canola oil / Rapeseed oil, one of the most widely</u> used cooking oils, from a (trademarked) cultivar of rapeseed.
  - Canthaxanthin color

- Caper (Capparis spinosa)
- Capsanthin color
- Capsorubin color
- Carrageenan A family of linear sulphated polysaccharides extracted from red seaweeds.
  - Caramel I (plain) color (brown and black)
- <u>Caramel II (Caustic Sulfite process) color (brown</u> and black)
- <u>Caramel III (Ammonia process) color (brown and black)</u>
- <u>Caramel IV (Ammonia sulfite process) color</u> (brown and black)
  - Caraway -
  - Carbamide flour treatment agent
  - Carbon black color (brown and black)
  - Carbon dioxide acidity regulator, propellant
  - Cardamom -
  - carmines color (red)
  - Carmoisine color (red) (FDA: Ext D&C Red #10)
  - Carnauba wax glazing agent
  - Carob Pod -
  - Carob pod oil/Algaroba oil, used medicinally.
  - Carotenes color
    - Alpha-carotene color
    - Beta-carotene color
    - Gamma-carotene color
- Carrageenan thickener, vegetable gum, stabilizer, gelling agent, emulsifier
  - Carrot Oil -
- Cashew oil somewhat comparable to olive oil. May have value for fighting dental cavities. [2]
  - Cassia -
  - Catechu extract -
  - Celery salt -
  - Celery seed -
- Wheat germ oil used as a food supplement, and for its "grainy" flavor. Also used medicinally. Highly unstable.

- Chalk color (white), anticaking agent, stabiliser
- Chervil (Anthriscus cerefolium) -
- Chicory -
- Chicory Root Extract High in Inulin
- Chile pepper -
- Chili powder -
- Chives (*Allium schoenoprasum*) -
- Chlorine dioxide flour treatment agent
- Chlorine flour treatment agent
- Chlorophylls and Chlorophyllins color (green)
- Chocolate Brown HT color
- Choline salts and esters emulsifier
- Chrysoine resorcinol color (red)
- Cicely (*Myrrhis odorata*)
- Sweet cicely (*Myrrhis odorata*)
- *Cilantro* (see Coriander) (*Coriandrum sativum*)
- Cinnamon -
- Cinnamon oil used for flavoring.
- Citranaxanthin color
- Citric acid food acid
- <u>Citric acid esters of mono- and diglycerides of fatty</u> acids emulsifier

# • Citrus red 2 - color (red)

- Citrus red 2 color (reCloves -
- Cochineal color (red)
- Coconut oil a cooking oil, high in saturated fat particularly used in baking and cosmetics.
  - Sage (Salvia officinalis) -
  - Copper complexes of chlorophylls color (green)
  - Coriander -
- Coriander seed oil used medicinally. Also used as a flavoring agent in pharmaceutical and food industries.
- Corn oil one of the most common, and inexpensive cooking oils.
  - Corn syrup -
- Cottonseed oil a major food oil, often used in industrial food processing.

- Cress -
- Crocetin color
- Crocin color
- Crosslinked Sodium carboxymethylcellulose emulsifier
  - Cryptoxanthin color
  - Cumin -
- Cumin oil/Black seed oil used as a flavor, particularly in meat products. Also used in veterinary medicine.
  - Cupric sulfate mineral salt
  - Curcumin color (yellow and orange)
  - Curry powder -
  - Curry leaf (Murraya koenigii) -
  - Cyanocobalamin (Vitamin B12) -
  - Cyclamates artificial sweetener
  - Cyclamic acid artificial sweetener
  - beta-cyclodextrin emulsifier
- Lemongrass (*Cymbopogon citratus, C. flexuosus*, and other species) -

#### D

- Damiana (Turnera aphrodisiaca, T. diffusa) -
- Dandelion leaf -
- Dandelion Root -
- Dandelion (*Taraxacum officinale*) -
- Decanal dimethyl acetal -
- Decanal -
- Decanoic acid -
- Dehydroacetic acid preservative
- Delta-tocopherol(synthetic) antioxidant
- Devil's claw (Harpagophytum procumbens) medicinal
  - Dextrin roasted starch thickener, vegetable gum
- Diacetyltartaric acid esters of mono- and diglycerides of fatty acids emulsifier
  - Dicalcium diphosphate anti-caking agent
  - Dilauryl thiodipropionate antioxidant

- Dill seed -
- Dill (Anethum graveolens) -
- Dimethyl dicarbonate preservative
- Dimethylpolysiloxane emulsifier, anti-caking agent
- Dioctyl sodium sulfosuccinate emulsifier
- Diphenyl preservative
- Diphosphates mineral salt, emulsifier
- Dipotassium guanylate flavor enhancer
- Dipotassium inosinate flavor enhancer
- Disodium 5'-ribonucleotides flavor enhancer
- Disodium ethylenediaminetetraacetate antioxidant, preservative
  - Disodium guanylate flavor enhancer
  - Disodium inosinate flavor enhancer
  - Distarch phosphate thickener, vegetable gum
  - Distearyl thiodipropionate antioxidant
  - Dl-alpha-tocopherol (synthetic) antioxidant
  - Dodecyl gallate antioxidant

### $\mathbf{E}$

- Echinacea -
- EDTA Antioxidant, Chelating Agent
- Egg -
- Egg yolk -
- Egg white -
- Elderberry -
- Eleutherococcus senticosus -
- Enzymatically hydrolyzed Carboxymethyl cellulose emulsifier
  - Enzyme treated starch thickener, vegetable gum
  - Epazote (Chenopodium ambrosioides)
- Epsom salts mineral salt, acidity regulator, firming agent
  - Erythorbin acid antioxidant
  - Erythrosine color (red) (FDA: FD&C Red #3)
  - Erythritol artificial sweetener
  - Ethanol (alcohol) -

- Ethyl maltol flavor enhancer
- Ethyl methyl cellulose thickener, vegetable gum, emulsifier
- Ethylparaben (ethyl para-hydroxybenzoate) preservative
  - Ethylenediamine tetraacetic acid -
- Evening primrose oil used as a food supplement for its purported medicinal properties.

#### $\mathbf{F}$

- Fantesk -
- Farnesol -
- Fast green FCF color (FDA: FD&C Green #3)
- Fat -
- Flavoxanthin color
- Fennel (Foeniculum vulgare)
- Fenugreek -
- Ferric ammonium citrate food acid
- Ferrous gluconate color retention agent
- Ferrous lactate -
- Filé powder -
- Five-spice powder (Chinese) -
- Fo-ti-tieng -
- Formaldehyde preservative
- Formic acid preservative
- Fructose -
- Fumaric acid acidity regulator

### G

- Galangal -
- Galangal root -
- Galbanum oil -
- Gallic acid -
- Gamma-tocopherol(synthetic) antioxidant
- Garam masala -
- Garlic extract -

- Garlic -
- Garlic oil -
- Gelatin/gelatine Gelling agent, emulsifier
- Gellan gum thickener, vegetable gum, stabilizer, emulsifier
  - Ginger -
  - Ginger oil -
  - Ginger root -
  - Ginseng -
  - Glacial Acetic acid preservative, acidity regulator
  - Glucitol -
  - Gluconate -
  - Glucono delta-lactone acidity regulator
  - Glucose oxidase antioxidant
  - Glucose syrup sweetener
  - Glutamate -
  - Glutamic acid flavor enhancer
  - Gluten -
  - Glycerin humectant, sweetener
  - Glycerol -
  - <u>Glycerol ester of wood rosin emulsifier</u>
  - Glyceryl distearate emulsifier
  - Glyceryl monostearate emulsifier
  - Glycine flavor enhancer
  - Glyoxylic acid -
  - Gold color (gold)
  - Grains of paradise -
  - Grape color extract -
- Grape seed oil suitable for cooking at high temperatures. Also used as a salad oil, and in cosmetics.
  - Green S color (green)
  - Green tea -
  - Guanylic acid flavor enhancer
  - Guar gum thickener, vegetable gum, stabilizer
  - Guaranine -
- Gum arabic / Gum acacia / E414 thickener, vegetable gum, stabilizer, emulsifier

# • Gum guaicum - preservative

#### H

- Haw bark -
- Hazelnut oil used for its flavor. Also used in skin care, because of its slight astringent nature.
  - Heliotropin -
  - Helium propellant
  - Hemlock oil -
  - Hemp oil a high quality food oil.
  - Heptyl p-hydroxybenzoate preservative
  - Hesperidin -
  - Hexamine (hexamethylene tetramine) preservative
  - Hexyl acetate -
  - High fructose corn syrup -
  - Horseradish -
  - Hydrochloric acid acidity regulator
- Hydroxypropyl cellulose thickener, vegetable gum, emulsifier
- Hydroxypropyl distarch phosphate thickener, vegetable gum
- Hydroxypropyl methylcellulose thickener, vegetable gum, emulsifier
  - Hydroxypropyl starch thickener, vegetable gum
  - Hyssop (Hyssopus officinalis) -

### I

- Indanthrene blue RS color (blue)
- Indigo carmine color (blue) (FDA: FD&C Blue #2)
- Indigotine color (blue) (FDA: FD&C Blue #2)
- Indole -
- Inosinate -
- Inosinic acid flavor enhancer
- Inositol -
- Insoluble fiber -
- Intense sweeteners -

- Inulin
- Invert sugar -
- Invertase -
- Iron ammonium citrate -
- Iron oxides and hydroxides color
- Isobutane propellant
- Isomalt humectant
- Isopropyl citrates antioxidant, preservative

### J

- Jasmine -
- Jamaican jerk spice -
- Jasmine absolute -
- Jiaogulan (Gynostemma pentaphyllum) -
- Juniper -
- Juniper berry -
- Juniper berry oil used as a flavor. Also used medicinally, including traditional medicine.
  - Juniper extract -

### K

- Kaffir Lime Leaves (Citrus hystrix, C. papedia) -
- Kaolin anti-caking agent
- <u>Kapok seed oil used as an edible oil, and in soap production.</u>
- Karaya gum thickener, vegetable gum, stabilizer, emulsifier
  - Kelp -
  - Kokam -
  - Kola nut extract -
  - Konjac thickener, vegetable gum
  - Konjac glucomannate thickener, vegetable gum
  - Konjac gum thickener, vegetable gum

### $\mathbf{L}$

• L-cysteine - flour treatment agent

- <u>Lactic acid acidity regulator, preservative,</u> antioxidant
- <u>Lactic acid esters of mono- and diglycerides of fatty</u> acids emulsifier
  - Lactitol humectant
  - Lactose -
- Lactylated fatty acid esters of glycerol and propylene glycol emulsifier
  - Larch gum -
  - Lard -
  - Latolrubine color
  - Laurel berry -
  - Laurel leaf oil -
  - Lavender (*Lavandula spp.*)
  - Lavender oil -
  - Lecithins antioxidant, Emulsifier
  - Lecithin citrate preservative
  - Lemon -
  - Lemon balm (*Melissa officinalis*) -
  - Lemon extract -
  - Lemon juice -
  - Lemon Myrtle (Backhousia citriodora) -
  - Lemon oil -
  - Lemon verbena (Lippia citriodora) -
  - Lemongrass Oil -
  - Leucine flavor enhancer
  - Licorice -
  - Lipases flavor enhancer
  - Lithol Rubine BK color
  - Litholrubine color
- Locust bean gum thickener, vegetable gum, stabilizer, gelling agent, emulsifier
  - Long pepper -
  - Lovage (Levisticum officinale) -
  - L(+)-Tartaric acid food acid
  - Lutein color
  - Lycopene color

- Lysine -
- Lysozyme preservative

#### $\mathbf{M}$

- Macadamia oil used as an edible oil. Also used as a massage oil.
  - Mace -
- <u>Magnesium carbonate anti-caking agent, mineral</u> salt
  - Magnesium chloride mineral salt
  - Magnesium citrate acidity regulator
  - Magnesium diglutamate flavor enhancer
  - Magnesium hydroxide mineral salt
  - Magnesium lactate food acid
  - Magnesium oxide anti-caking agent
- <u>Magnesium phosphates mineral salt, anti-caking</u> agent
- <u>Magnesium salts of fatty acids emulsifier, stabiliser, anti-caking agent</u>
  - Magnesium silicate anti-caking agent
  - Magnesium stearate emulsifier, stabiliser
- <u>Magnesium sulfate mineral salt, acidity regulator,</u> firming agent
  - Mahlab -
  - Malabathrum -
  - Malic acid acidity regulator
  - Malt extract flavor enhacer
  - Maltitol humectant, stabiliser
  - Maltodextrin carbohydrate sweetener
  - Maltol flavor enhancer
  - Maltose -
  - Mandarin oil-leavening agent
  - Mannitol humectant, anti-caking agent, sweetener
  - Margarine -
  - Marjoram (*Origanum majorana*)
  - Mastic -

- Meadow foam seed oil highly stable oil, with over 98% long-chain fatty acids. Competes with rapeseed oil for industrial applications. [4]
- Mega-purple a Kosher food additive made from grapes
- Mentha arvensis oil/Mint oil, used in flavoring toothpastes, mouthwashes and pharmaceuticals, as well as in aromatherapy and other medicinal applications. [5]
  - Metatartaric acid food acid, emulsifier
  - Methionine -
  - Methyl butyrate -
  - Methyl disulfide -
- Methyl ethyl cellulose thickener, vegetable gum, emulsifier
  - Methyl hexenoate -
  - Methyl isobutyrate -
- Methyl cellulose thickener, emulsifier, vegetable gum
- Methyl paraben (methyl para-hydroxybenzoate) preservative
  - Methyl theobromine -
  - Microcrystalline cellulose anti-caking agent
  - Milk thistle (*Silybum*) -
  - Mint (*Mentha spp.*) -
- <u>Mixed acetic and tartaric acid esters of mono- and diglycerides of fatty acids emulsifier</u>
  - Modified starch -
  - Molasses extract -
  - Bergamot (Monarda didyma) -
  - Mono- and diglycerides of Fatty acids emulsifier
  - Mono ammonium glutamate flavor enhancer
  - Mono potassium glutamate flavor enhancer
  - Mono sodium glutamate (MSG) flavor enhancer
  - Mono starch phosphate thickener, vegetable gum
  - Montanic acid esters humectant
  - Mullein (Verbascum thapsus)

- Mustard oil (essential oil), containing a high percentage of allyl isothiocyanate or other isothiocyanates, depending on the species of mustard
- Mustard oil (pressed) used in India as a cooking oil. Also used as a massage oil.
  - Mustard plant -
  - Mustard seed -

#### N

- Natamycin preservative
- Neohesperidin dihydrochalcone artificial sweetener
- Niacin (vitamin B<sub>3</sub>) color retention agent
- $_{\circ}$  Nicotinic acid (vitamin  $B_3$ ) color retention agent
- $\begin{tabular}{ll} $\circ$ & Nicotinamide (vitamin $B_3$) color retention \\ agent \\ \end{tabular}$
- Nigella (Kolanji, Black caraway) -
- Nisin preservative
- Nitrogen propellant
- Nitrous oxide propellant
- Norbixin color
- Nutmeg -

## 0

- Octyl gallate antioxidant
- Evening primrose (*Oenothera biennis* et al.) -
- Okra oil (Hibiscus seed oil) from the seed of the *Hibiscus esculentus*. Composed predominantly of oleic and lanoleic acids.
- Olive oil used in cooking cosmetics soaps and as a fuel for traditional oil lamps
  - Orange GGN color (orange)
- Orange oil like lemon oil cold pressed rather than distilled. Consists of 90% d-Limonene. Used as a fragrance, in cleaning products and in flavoring foods. [6]
  - Orcein color (red)

- Orchil color (red)
- Oregano (*Origanum vulgare, O. heracleoticum*, and other species) -
- Oregano oil contains thymol and carvacrol making it a useful fungicide. Also used to treat digestive problems
  - Orris root -
  - Ortho phenyl phenol preservative
  - Oxidised polyethylene wax humectant
  - Oxidised starch thickener, vegetable gum
  - Oxystearin antioxidant, sequestrant

## P

- Palm oil the most widely produced tropical oil. Also used to make biofuel.
  - Panax ginseng -
  - Panax quinquefolius -
  - Ponch phoran -
  - Pandan leaf -
  - Pantothenic acid (Vitamin B<sub>5</sub>) -
- Papain A cysteine protease hydrolase enzyme present in papaya (Carica papaya) and mountain papaya (Vasconcellea cundinamarcensis).
  - Paprika red
  - Paprika -
  - Paprika extract -
  - Paraffins glazing agent
  - Parsley (Petroselinum crispum) -
  - Patent blue V color (blue)
- Peanut oil / Ground nut oil mild-flavored cooking oil.
- Pecan oil valued as a food oil, but requiring fresh pecans for good quality oil. [7]
  - Pectin vegetable gum, emulsifier
- Perilla seed oil high in omega-3 fatty acids. Used as an edible oil, for medicinal purposes, in skin care products and as a drying oil.

- Phosphated distarch phosphate thickener, vegetable gum
  - Phosphoric acid food acid
  - Phytic acid preservative
  - Pigment Rubine color
  - Pimaricin preservative
  - Pine needle oil
- Pine seed oil an expensive food oil, used in salads and as a condiment.
- Pistachio oil strongly flavored oil, particularly for use in salads.
  - Prune kernel oil marketed as a gourmet cooking oil
  - Poly vinyl pyrrolidone -
  - Poly dextrose humectant
  - Poly ethylene glycol 8000 antifoaming agent
  - Poly glycerol esters of fatty acids emulsifier
  - Poly glycerol poly ricinoleate emulsifier
  - Poly methylsiloxane antifoaming agent
  - Poly oxyethylene (40) stearate emulsifier
  - Poly oxyethylene (8) stearate emulsifier, stabilizer
  - Poly phosphates mineral salt, emulsifier
  - Poly sorbate 20 emulsifier
  - Poly sorbate 40 emulsifier
  - Poly sorbate 60 emulsifier
  - Poly sorbate 65 emulsifier
  - Poly sorbate 80 emulsifier
  - Poly vinyl poly pyrrolidone color stabiliser
- Pomegranate seeds (though some consider these a fruit, not a spice)
  - Ponceau 4R color (FDA: Ext D&C Red #8)
  - Ponceau 6R color
  - Ponceau SX color
  - Poppy seed -
- Poppy seed oil used for cooking, moisturizing skin, and in paints, varnishes and soaps.
  - Potassium acetates preservative, acidity regulator
  - Potassium adipate food acid

- Potassium alginate thickener, vegetable gum, stabilizer, gelling agent, emulsifier
  - Potassium aluminium silicate anti-caking agent
  - Potassium ascorbate antioxidant (water soluble)
  - Potassium benzoate preservative
  - Potassium bicarbonate mineral salt
  - Potassium bisulfite preservative, antioxidant
  - Potassium bromate flour treatment agent
  - Potassium carbonate mineral salt
  - Potassium chloride mineral salt
  - Potassium citrates food acid
  - Potassium ferrocyanide anti-caking agent
  - Potassium fumarate food acid
  - Potassium gluconate stabiliser
- Potassium hydrogen sulfite preservative, antioxidant
  - Potassium hydroxide mineral salt
  - Potassium lactate food acid
  - Potassium malate food acid
  - Potassium meta bisulfite preservative, antioxidant
  - Potassium nitrate preservative, color fixative
  - Potassium nitrite preservative, color fixative
  - Potassium phosphates mineral salt
  - Potassium propionate preservative
- <u>Potassium salts of fatty acids emulsifier, stabiliser, anti-caking agent</u>
  - Potassium sodium tartrate food acid
  - Potassium sorbate preservative
  - Potassium sulfate mineral salt, seasoning
  - Potassium sulfite preservative, antioxidant
  - Potassium tartrates food acid
  - Powdered Cellulose anti-caking agent
  - Primrose (*Primula*) candied flowers, tea
- Processed Eucheuma seaweed thickener, vegetable gum, stabilizer, gelling agent, emulsifier
- Propane-1,2-diol alginate thickener, vegetable gum, stabilizer, emulsifier

- Propionic acid preservative
- Propyl gallate antioxidant
- Propylene glycol humectant
- Propylene glycol alginate thickener, vegetable gum, stabilizer, emulsifier
  - Propylene glycol esters of fatty acids emulsifier
- Propylparaben (propyl para-hydroxybenzoate) preservative
- Pumpkin seed oil a specialty cooking oil, produced in Austria and Slovenia. Doesn't tolerate high temperatures.
  - Pulegone
  - Purslane -
  - Pyridoxine hydrochloride (Vitamin B<sub>6</sub>) -

# Q

- Quatre épices -
- Quillaia extract humectant
- Quinoa oil similar in composition and use to corn oil
- Quinoline Yellow WS color (yellow and orange) (FDA: D&C Yellow #10)

### R

- Ramtil oil pressed from the seeds of the one of several species of genus Guizotia abyssinica (Niger pea) in India and Ethiopia. Used for both cooking and lighting.
  - Ras-el hanout
  - Raspberry (leaves)
  - Red 2G color
  - Refined microcrystalline wax glazing agent
  - Rhodoxanthin color
  - Riboflavin (vitamin B<sub>2</sub>) color (yellow and orange)
- Rice bran oil suitable for high temperature cooking. Widely used in Asia.
  - Rosemary (Rosmarinus officinalis) -
  - Rubixanthin color

## S

- Saccharin artificial sweetener
- Safflower oil a flavorless and colorless cooking oil.
- Safflower -
- Saffron color
- Saigon Cinnamon -
- Salad Burnet (Sanguisorba minor or Poterium sanguisorba)
  - Salt -
  - Sandalwood color
  - Savory (Satureja hortensis, S. montana)
  - Scarlet GN color
- Sesame oil used as a cooking oil, and as a massage oil, particularly in India.
  - Sesame seed -
  - Shellac glazing agent
  - Silicon dioxide anti-caking agent
  - Silver color (silver)
  - Luohanguo
  - Sodium acetate preservative, acidity regulator
  - Sodium adipate food acid
- Sodium alginate thickener, vegetable gum, stabilizer, gelling agent, emulsifier
- Sodium aluminium phosphate acidity regulator, emulsifier
- Sodium alumino silicate (sodium aluminium silicate)
   anti-caking agent
  - Sodium ascorbate antioxidant (water soluble)
  - Sodium benzoate preservative
  - Sodium bicarbonate mineral salt
- Sodium bisulfite (sodium hydrogen sulfite) preservative, antioxidant
  - Sodium carbonate mineral salt
  - Sodium carboxy methylcellulose emulsifier
  - Sodium citrates food acid
  - Sodium dehydro acetate preservative
  - Sodium erythorbate antioxidant

- Sodium erythorbin antioxidant
- Sodium ethyl para-hydroxybenzoate preservative
- Sodium ferrocyanide anti-caking agent
- Sodium formate preservative
- Sodium fumarate food acid
- Sodium gluconate stabiliser
- <u>Sodium hydrogen acetate preservative, acidity</u> regulator
  - Sodium hydroxide mineral salt
  - Sodium lactate food acid
  - Sodium malates food acid
- Sodium metabisulfite preservative, antioxidant, bleaching agent
  - Sodium methyl para-hydroxy benzoate preservative
  - Sodium nitrate preservative, color fixative
  - Sodium nitrite preservative, color fixative
  - Sodium orthophenyl phenol preservative
  - Sodium propionate preservative
  - Sodium propyl para-hydroxybenzoate preservative
  - Sodium sorbate preservative
  - Sodium stearoyl lactylate emulsifier
- Sodium succinates acidity regulator, flavor enhancer
- <u>Sodium salts of fatty acids emulsifier, stabiliser,</u> anti-caking agent
- <u>Sodium sulfite mineral salt, preservative, antioxidant</u>
  - Sodium sulfite preservative, antioxidant
  - Sodium tartrates food acid
  - Sodium tetraborate preservative
  - Sorbic acid preservative
  - Sorbitan mono laurate emulsifier
  - Sorbitan mono oleate emulsifier
  - Sorbitan mono palmitate emulsifier
  - Sorbitan mono stearate emulsifier
  - Sorbitan tristearate emulsifier
  - Sorbitol humectant, emulsifier, sweetener

- Sorbol -
- Sorrel (*Rumex spp.*) -
- Soybean oil accounts for about half of worldwide edible oil production.
- Spearmint oil often used in flavoring mouthwash and chewing gum, among other applications. [11]
  - Star anise -
- Star anise oil highly fragrant oil using in cooking. Also used in perfumery and soaps, has been used in toothpastes, mouthwashes, and skin creams. 90 % of the world's star anise crop is used in the manufacture of Tamiflu, a drug used to treat avian flu.
- Starch sodium octenyl succinate thickener, vegetable gum
  - Stearic acid anti-caking agent
  - Stearyl tartarate emulsifier
  - Succinic acid food acid
  - Sucralose artificial sweetener
  - Sucroglycerides emulsifier
  - Sucrose acetate isobutyrate emulsifier, stabiliser
  - Sucrose esters of fatty acids emulsifier
  - Sugar -
  - Sulfur dioxide preservative, antioxidant
  - Sulfuric acid acidity regulator
  - Sumac -
- Sunflower oil a common cooking oil, also used to make biodiesel.
- Sunset Yellow FCF color (yellow and orange) (FDA: FD&C Yellow #6)
  - Sweet basil -
  - Sweet woodruff -
  - Szechuan pepper (*Xanthoxylum piperitum*) -

#### $\mathbf{T}$

- <u>Talc anti-caking agent</u>
- Tamarind -
- Tanacetum balsamita / Costmary -

- Tandoori masala -
- Tannins color, emulsifier, stabiliser, thickener
- Tansy -
- Tara gum thickener, vegetable gum, stabilizer
- Tarragon (Artemisia dracunculus) -
- Tartaric acid esters of mono- and diglycerides of fatty acids emulsifier
- Tartrazine color (yellow and orange) (FDA: FD&C Yellow #5)
- Camellia oil / Tea oil, widely used in southern China as a cooking oil. Also used in making soaps, hair oils and a variety of other products.
  - Tert-butylhydroquinone antioxidant
- Tetrahydrocannabinol- flavor enhancer, potent anticarcinogen
  - Thaumatin flavor enhancer, artificial sweetener
  - Theine -
  - Thermally oxidised soya bean oil emulsifier
  - Thiabendazole preservative
  - Thiamine (Vitamin B1) -
  - Thiodipropionic acid antioxidant
  - Thyme -
  - stannous chloride color retention agent, antioxidant
  - Titanium dioxide color (white)
  - Tocopherol (Vitamin E) -
  - Tocopherol concentrate (natural) antioxidant
- Tragacanth thickener, vegetable gum, stabilizer, emulsifier
  - Triacetin humectant
  - Triammonium citrate food acid
  - Triethyl citrate thickener, vegetable gum
  - Trimethylxanthine -
  - Triphosphates mineral salt, emulsifier
  - sodium phosphates Mineral Salt
  - Turmeric color (yellow and orange)

# V

- Vanilla (Vanilla planifolia) -
- Vegetable carbon color (brown and black)
- Vinegar -
- Violaxanthin color
- Vitamin -
  - Vitamin A (Retinol) -
  - $\circ$  Vitamin B<sub>1</sub> (Thiamine) -
  - Vitamin B<sub>2</sub> (Riboflavin) -
  - o Vitamin B<sub>5</sub> (Pantothenic acid) -
  - Vitamin B<sub>6</sub> (Pyrodoxine) -
  - o Vitamin B<sub>12</sub> (Cyanocobalamin) -
  - o Vitamin C (Ascorbic acid) -
  - o Vitamin D (Calciferol) -
  - Vitamin E (Tocopherol) -
  - Vitamin K (Potassium) -

### $\mathbf{W}$

- Walnut oil used for its flavor, also used by Renaissance painters in oil paints
  - Wasabi -
  - Wattle seed -

### X

- Xanthan gum thickener, vegetable gum, stabilizer
- Xylitol humectant, stabiliser

#### Y

- Yellow 2G color (yellow and orange)
- Yucca extract -

# $\mathbf{Z}$

- Zeaxanthin color
- Zinc acetate flavor enhancer

# List of additives in cigarettes

### A

- Acetanisole
- Acetic acid
- Acetoin
- Acetophenone
- 6-Acetoxydihydrotheaspirane
- 2-Acetyl-3-Ethylpyrazine
- 2-Acetyl-5-Methylfuran
- Acetylpyrazine
- 2-Acetylpyridine
- 3-Acetylpyridine
- 2-Acetylthiazole
- Aconitic Acid
- dl-Alanine
- Alfalfa Extract
- Allspice Extract, Oleoresin, and Oil
- Allyl Hexanoate
- Allyl Ionone
- Almond Bitter Oil
- Ambergris Tincture
- Ammonium Bicarbonate
- Ammonium Hydroxide
- <u>Diammonium phosphate</u>
- Ammonium sulfide
- Amyl Alcohol
- Amyl Butyrate
- Amyl Formate
- Amyl Octanoate
- alpha-Amylcinnamaldehyde
- Amyris Oil
- trans-Anethole
- Angelica Root Extract, Oil and Seed Oil
- Anise

- Anise Star, Extract and Oils
- Anisyl Acetate
- Anisyl Alcohol
- Anisyl Formate
- Anisyl Phenylacetate
- Apple Juice Concentrate, Extract, and Skins
- Apricot Extract and Juice Concentrate
- L-Arginine
- Asafetida Fluid Extract And Oil
- Ascorbic Acid
- L-Asparagine Monohydrate
- L-Aspartic Acid

#### B

- Balsam of Peru and Oil
- Basil Oil
- Bay leaf, Oil and Sweet Oil
- Beeswax White
- Beet Juice Concentrate
- Benzaldehyde
- Benzaldehyde Glyceryl Acetal
- Benzoic acid, Benzoin
- Benzoin Resin
- Benzophenone
- Benzyl Alcohol
- Benzyl Benzoate
- Benzyl Butyrate
- Benzyl Cinnamate
- Benzyl Propionate
- <u>Benzyl salicylate</u>
- Bergamot Oil
- Bisabolene
- Black Currant Buds Absolute
- Borneol
- Bornyl Acetate
- Buchu Leaf Oil
- 1,3-Butanediol

- 2,3-Butanedione
- 1-Butanol
- 2-Butanone
- 4(2-Butenylidene)-3,5,5-Trimethyl-2-Cyclohexen-1-

### One

- Butter, Butter Esters, and Butter Oil
- Butyl acetate
- Butyl butyrate
- Butyl butyryl lactate
- Butyl isovalerate
- Butyl phenylacetate
- Butyl ndecylenate
- 3-Butylidenephthalide
- Butyric Acid

### $\mathbf{C}$

- Cadinene
- Caffeine
- Calcium Carbonate
- Camphene
- Cananga Oil
- Capsicum Oleoresin
- Caramel color
- Caraway Oil
- Carbon Dioxide
- Cardamom Oleoresin, Extract, Seed Oil, and Powder
- Carob Bean and Extract
- beta-Carotene
- Carrot Oil
- Carvacrol
- 4-Carvomenthenol
- L-Carvone
- beta-Caryophyllene
- beta-Caryophyllene Oxide
- Cascarilla Oil and Bark Extract
- Cassia Bark Oil
- Cassie Absolute and Oil

- Castoreum Extract, Tincture and Absolute
- Cedar Leaf Oil
- Cedarwood Oil Terpenes and Virginiana
- Cedrol
- Celery Seed Extract, Solid, Oil, And Oleoresin
- Cellulose Fiber
- Chamomile Flower Oil And Extract
- Chicory Extract
- Chocolate
- Cinnamaldehyde
- Cinnamic Acid
- Cinnamon Leaf Oil, Bark Oil, and Extract
- <u>Cinnamyl Acetate</u>
- Cinnamyl Alcohol
- <u>Cinnamyl Cinnamate</u>
- Cinnamyl Isovalerate
- Cinnamyl Propionate
- Citral
- Citric Acid
- Citronella Oil
- dl-Citronellol
- Citronellyl Butyrate
- Citronellyl Isobutyrate
- Civet Absolute
- Clary Oil
- Clover Tops, Red Solid Extract
- Cocoa
- Cocoa Shells, Extract, Distillate And Powder
- Coconut Oil
- Coffee
- Cognac White and Green Oil
- Copaiba Oil
- Coriander Extract and Oil
- Corn Oil
- Corn Silk
- Costus Root Oil
- Cubeb Oil

- Cuminaldehyde
- para-Cymene
- L-Cysteine

#### D

- Dandelion Root Solid Extract
- Davana Oil
- 2-trans,4-trans-Decadienal
- delta-Decalactone
- gamma-Decalactone
- Decanal
- Decanoic acid
- 1-Decanol
- 2-Decenal
- Dehydromenthofurolactone
- Diethyl Malonate
- Diethyl Sebacate
- 2,3-Diethylpyrazine
- Dihydro Anethole
- 5,7-Dihydro-2-Methylthieno(3,4-D) Pyrimidine
- Dill Seed Oil and Extract
- meta-Dimethoxybenzene
- para-Dimethoxybenzene
- 2,6-Dimethoxyphenol
- Dimethyl Succinate
- 3,4-Dimethyl-1,2-Cyclopentanedione
- 3,5-Dimethyl-1,2-Cyclopentanedione
- 3,7-Dimethyl-1,3,6-Octatriene
- 4,5-Dimethyl-3-Hydroxy-2,5-Dihydrofuran-2-One
- 6,10-Dimethyl-5,9-Undecadien-2-One
- 3,7-Dimethyl-6-Octenoic Acid
- 2,4 Dimethylacetophenone
- alpha,para-Dimethylbenzyl Alcohol
- alpha,alpha-Dimethylphenethyl Acetate
- alpha, alpha Dimethylphenethyl Butyrate
- 2,3-Dimethylpyrazine
- 2,5-Dimethylpyrazine

- 2,6-Dimethylpyrazine
- Dimethyltetrahydrobenzofuranone
- delta-Dodecalactone
- gamma-Dodecalactone

#### $\mathbf{E}$

- para-Ethoxybenzaldehyde
- Ethyl 10-Undecenoate
- Ethyl 2-Methylbutyrate
- Ethyl acetate
- Ethyl acetoacetate
- Ethyl alcohol
- Ethyl benzoate
- Ethyl butyrate
- Ethyl cinnamate
- Ethyl decanoate
- Ethyl fenchol
- Ethyl furoate
- Ethyl heptanoate
- Ethyl hexanoate
- Ethyl isovalerate
- Ethyl lactate
- Ethyl laurate
- Ethyl levulinate
- Ethyl maltol
- Ethyl methylphenylglycidate
- Ethyl myristate
- Ethyl nonanoate
- Ethyl octadecanoate
- Ethyl octanoate
- Ethyl oleate
- Ethyl palmitate
- Ethyl phenylacetate
- Ethyl propionate
- Ethyl salicylate
- Ethyl trans-2-butenoate
- Ethyl valerate

- Ethyl vanillin
- 2-Ethyl (or Methyl)-(3,5 and 6)-Methoxypyrazine
- 2-Ethyl-1-Hexanol,3-Ethyl-2-Hydroxy-2-

# Cyclopenten-1-One

- 2-Ethyl-3,(5 or 6)-Dimethylpyrazine
- 5-Ethyl-3-Hydroxy-4-Methyl-2(5H)-Furanone
- 2-Ethyl-3-Methylpyrazine
- 3-Ethylpyridine
- 4-Ethylbenzaldehyde
- 4-Ethylguaiacol
- 4-Ethylphenol (para-Ethylphenol)
- Eucalyptol

### F

- Farnesol
- D-Fenchone
- Fennel Sweet Oil
- Fenugreek, Extract, Resin, and Absolute
- fig Juice Concentrate
- Food Starch Modified
- Furfuryl Mercaptan
- 4-(2-Furyl)-3-Buten-2-One

### G

- Galbanum Oil
- Genet Absolute
- Gentian Root Extract
- Geraniol
- Geranium Rose Oil
- Geranyl Acetate
- Geranyl Butyrate
- Geranyl Formate
- Geranyl Isovalerate
- Geranyl Phenylacetate
- Ginger Oil and Oleoresin
- L-Glutamic Acid

- L-Glutamine
- <u>Glycerol</u>
- Glycyrrhizin Ammoniated
- Grape Juice Concentrate
- Guaiac Wood Oil
- Guaiacol
- Guar Gum

### Η

- 2,4-Heptadienal
- gamma-Heptalactone
- Heptanoic Acid
- 2-Heptanone
- 3-Hepten-2-One
- 2-Hepten-4-One
- 4-Heptenal
- trans-2-Heptenal
- Heptyl acetate
- omega-6-Hexadecenlactone
- gamma-Hexalactone
- Hexanal
- Hexanoic acid
- 2-Hexen-1-Ol
- 3-Hexen-1-Ol
- cis-3-Hexen-1-Yl Acetate
- 2-Hexenal
- 3-Hexenoic Acid
- trans-2-Hexenoic Acid
- cis-3-Hexenyl Formate
- Hexyl 2-Methylbutyrate
- Hexyl Acetate
- Hexyl Alcohol
- Hexyl Phenylacetate
- L-Histidine
- Honey
- Hops Oil
- Hydrolyzed Milk Solids

- Hydrolyzed Plant Proteins
- 5-Hydroxy-2,4-Decadienoic Acid delta- Lactone
- 4-Hydroxy-2,5-Dimethyl-3(2H)-Furanone
- 2-Hydroxy-3,5,5-Trimethyl-2-Cyclohexen-1-One
- 4-Hydroxy -3-Pentenoic Acid Lactone
- 2-Hydroxy-4-Methylbenzaldehyde
- 4-Hydroxybutanoic Acid Lactone
- Hydroxycitronellal
- 6-Hydroxydihydrotheaspirane
- 4-(para-Hydroxyphenyl)-2-Butanone
- Hyssop Oil

## I

- Immortelle Absolute and Extract
- alpha-Ionone
- beta-Ionone
- alpha-Irone
- Isoamyl Acetate
- <u>Isoamyl Benzoate</u>
- Isoamyl Butyrate
- <u>Isoamyl Cinnamate</u>
- Isoamyl Formate, Isoamyl Hexanoate
- Isoamyl Isovalerate
- Isoamyl Octanoate
- Isoamyl Phenylacetate
- Isobornyl Acetate
- Isobutyl Acetate
- Isobutyl Alcohol
- Isobutyl Cinnamate
- Isobutyl Phenylacetate
- Isobutyl Salicylate
- 2-Isobutyl-3-Methoxypyrazine
- alpha-Isobutylphenethyl Alcohol
- Isobutyraldehyde
- Isobutyric Acid
- d,l-Isoleucine
- alpha-Isomethylionone

- 2-Isopropylphenol
- Isovaleric Acid

J

Jasmine Absolute, Concrete and Oil

K

Kola Nut Extract

L

- Labdanum Absolute and Oleoresin
- Lactic Acid
- Lauric Acid
- Lauric Aldehyde
- Lavandin Oil
- Lavender oil
- Lemon Oil and Extract
- Lemongrass Oil
- L-Leucine
- Levulinic acid
- <u>Liquorice root, fluid, extract and powder</u>
- Lime Oil
- Linalool
- Linalool Oxide
- Linalyl acetate
- Linden Flowers
- Lovage Oil And Extract
- L-Lysine

 $\mathbf{M}$ 

- Mace Powder, Extract and Oil
- Magnesium Carbonate
- Malic Acid
- Malt and Malt Extract
- Maltodextrin

- Maltol
- Maltyl Isobutyrate
- Mandarin Oil
- Maple Syrup and Concentrate
- Mate Leaf, Absolute and Oil
- para-Mentha-8-Thiol-3-One
- Menthol
- Menthone
- Menthyl Acetate
- dl-Methionine
- Methoprene
- 2-Methoxy-4-Methylphenol
- 2-Methoxy-4-Vinylphenol
- para-Methoxybenzaldehyde
- 1-(para-Methoxyphenyl)-1-Penten-3-One
- 4-(para-Methoxyphenyl)-2-Butanone
- 1-(para-Methoxyphenyl)-2-Propanone
- Methoxypyrazine
- Methyl 2-Furoate
- Methyl 2-Octynoate
- Methyl 2-Pyrrolyl Ketone
- Methyl Anisate
- Methyl anthranilate
- Methyl Benzoate
- Methyl Cinnamate
- Methyl Dihydrojasmonate
- Methyl Ester of Rosin, Partially Hydrogenated
- Methyl Isovalerate
- Methyl Linoleate (48%)
- Methyl Linolenate (52%) Mixture
- Methyl Naphthyl Ketone
- Methyl Nicotinate
- Methyl phenylacetate
- Methyl Salicylate
- Methyl Sulfide
- 3-Methyl-1-Cyclopentadecanone
- 4-Methyl-1-Phenyl-2-Pentanone

- 5-Methyl-2-Phenyl-2-Hexenal
- 5-Methyl-2-Thiophenecarboxaldehyde
- 6-Methyl-3,-5-Heptadien-2-One
- 2-Methyl-3-(para-Isopropylphenyl) Propionaldehyde
- 5-Methyl-3-Hexen-2-One
- 1-Methyl-3-Methoxy-4-Isopropylbenzene
- 4-Methyl-3-Pentene-2-One
- 2-Methyl-4-Phenylbutyraldehyde
- 6-Methyl-5-Hepten-2-One
- 4-Methyl-5-Thiazoleethanol
- 4-Methyl-5-Vinylthiazole
- Methyl-alpha-Ionone
- Methyl-trans-2-Butenoic Acid
- 4-Methylacetophenone
- para-Methylanisole
- alpha-Methylbenzyl Acetate
- alpha-Methylbenzyl Alcohol
- 2-Methylbutyraldehyde
- 3-Methylbutyraldehyde
- 2-Methylbutyric Acid
- alpha-Methylcinnamaldehyde
- Methylcyclopentenolone
- 2-Methylheptanoic Acid
- 2-Methylhexanoic Acid
- 3-Methylpentanoic Acid
- 4-Methylpentanoic Acid
- 2-Methylpyrazine
- 5-Methylquinoxaline
- 2-Methyltetrahydrofuran-3-one
- (Methylthio)Methylpyrazine (Mixture Of Isomers)
- 3-Methylthiopropionaldehyde
- Methyl 3-Methylthiopropionate
- 2-Methylvaleric Acid
- Mimosa Absolute and Extract
- Molasses Extract and Tincture
- Mountain Maple Solid Extract
- Mullein Flowers

- Myristaldehyde
- Myristic acid
- Myrrh Oil

# N

- beta-Napthyl Ethyl Ether
- Nerol
- Neroli Bigarde Oil
- Nerolidol
- Nona-2-trans,6-cis-dienal
- 2,6-Nonadien-1-ol
- gamma-Nonalactone
- Nonanal
- Nonanoic Acid
- Nonanone
- trans-2-Nonen-1-ol
- 2-Nonenal
- Nonyl Acetate
- Nutmeg Powder and Oil
- Nicotine

# O

- Oak chips extract and oil
- Oakmoss absolute
- 9,12-Octadecadienoic acid (48%) and 9,12,15-

# Octadecatrienoic acid (52%)

- delta-Octalactone
- gamma-Octalactone
- Octanal
- Octanoic acid
- 1-Octanol
- 2-Octanone
- 3-Octen-2-one
- 1-Octen-3-ol
- 1-Octen-3-yl acetate
- 2-Octenal

- Octyl isobutyrate
- Oleic acid
- Olibanum oil
- Opoponax oil and gum
- Orange blossom water, absolute, and leaf absolute
- Orange oil and extract
- Origanum oil
- Orris concrete oil and root extract

### P

- Palmarosa Oil
- Palmitic acid
- Parsley Seed Oil
- Patchouli Oil
- omega-Pentadecalactone
- 2,3-Pentanedione
- 2-Pentanone
- 4-Pentenoic Acid
- 2-Pentylpyridine
- Pepper Oil, Black And White
- Peppermint Oil
- Peruvian (Bois De Rose) Oil
- Petitgrain Absolute, Mandarin Oil and Terpeneless

# Oil

- alpha-Phellandrene
- 2-Phenenthyl Acetate
- Phenethyl alcohol
- Phenethyl Butyrate
- <u>Phenethyl Cinnamate</u>
- Phenethyl Isobutyrate
- Phenethyl Isovalerate
- Phenethyl Phenylacetate
- Phenethyl Salicylate
- 1-Phenyl-1-Propanol
- 3-Phenyl-1-Propanol
- 2-Phenyl-2-Butenal
- 4-Phenyl-3-Buten-2-Ol

- 4-Phenyl-3-Buten-2-One
- Phenyl acetaldehyde
- Phenyl acetic Acid
- L-Phenylalanine
- 3-Phenylpropionaldehyde
- 3-Phenylpropionic Acid
- 3-Phenylpropyl Acetate
- 3-Phenylpropyl Cinnamate
- 2-(3-Phenylpropyl)Tetrahydrofuran
- Phosphoric Acid
- Pimenta Leaf Oil
- Pine Needle Oil, Pine Oil, Scotch
- Pineapple Juice Concentrate
- alpha-Pinene, beta-Pinene
- D-Piperitone
- Piperonal
- Pipsissewa Leaf Extract
- Plum Juice
- Potassium Sorbate
- L-Proline
- Propenylguaethol
- Propionic Acid
- Propyl Acetate
- Propyl para-Hydroxybenzoate
- Propylene Glycol
- 3-Propylidenephthalide
- Prune Juice and Concentrate
- Pyridine
- Pyroligneous Acid And Extract
- Pyrrole
- Pyruvic Acid

## R

- Raisin Juice Concentrate
- Rhodinol
- Rose Absolute and Oil
- Rosemary Oil

- Rum
- Rum Ether
- Rye Extract

# S

- Sage, Sage oil, and Sage oleoresin
- Salicyl aldehyde
- Sandal wood oil, yellow
- Sclareolide
- Skatole
- Smoke flavor
- Snakeroot oil
- Sodium acetate
- Sodium benzoate
- Sodium bicarbonate
- Sodium carbonate
- Sodium chloride
- Sodium citrate
- Sodium hydroxide
- Solanone
- Spearmint oil
- Styrax extract, gum and oil
- Sucrose octaacetate
- Sugar alcohols
- Sugars

### T

- Tagetes Oil
- Tannic Acid
- Tartaric Acid
- Tea Leaf and Absolute
- alpha-Terpineol
- Terpinolene
- Terpinyl Acetate
- 5,6,7,8-Tetrahydroquinoxaline

• 1,5,5,9-Tetramethyl-13-

# Oxatricyclo(8.3.0.0(4,9))Tridecane

• 2,3,4,5, and 3,4,5,6-Tetramethylethyl-

# Cyclohexanone

- 2,3,5,6-Tetramethylpyrazine
- Thiamine Hydrochloride
- Thiazole
- L-Threonine
- Thyme Oil, White and Red
- Thymol
- Tobacco Extracts
- Tocopherols (mixed)
- Tolu balsam Gum and Extract
- Tolualdehydes
- para-Tolyl 3-Methylbutyrate
- para-Tolyl Acetaldehyde
- para-Tolyl Acetate
- para-Tolyl Isobutyrate
- para-Tolyl Phenylacetate
- Triacetin
- 2-Tridecanone
- 2-Tridecenal
- Tri ethyl Citrate
- 3,5,5-Trimethyl-1-Hexanol
- para,alpha,alpha-Trimethylbenzyl Alcohol
- 4-(2,6,6-Trimethylcyclohex-1-Enyl)But-2-En-4-One
- 2,6,6-Trimethylcyclohex-2-Ene-1,4-Dione
- 2,6,6-Trimethylcyclohexa-1,3-Dienyl Methan
- 4-(2,6,6-Trimethylcyclohexa-1,3-Dienyl)But-2-En-4-

#### One

- 2,2,6-Trimethylcyclohexanone
- 2,3,5-Trimethylpyrazine
- L-Tyrosine

## U

- delta-Undecalactone
- gamma-Undecalactone

- Undecanal
- 2-Undecanone
- 10-Undecenal
- <u>Urea</u>

# V

- Valencene
- Valeraldehyde
- Valerian Root Extract, Oil and Powder
- Valeric acid
- gamma-Valerolactone
- Valine
- Vanilla Extract And Oleoresin
- Vanillin
- Veratraldehyde
- Vetiver Oil
- Vinegar
- Violet Leaf Absolute

# W

- Walnut Hull Extract
- Water
- Wheat Extract And Flour
- Wild Cherry Bark Extract
- Wine and Wine Cherry

## X

- Xanthan Gum
- 3,4-Xylenol

# $\mathbf{Y}$

Yeast