

1. ACETANISOLE - FDA approved food additive; FEMA GRAS; found in Anise, beef, cranberry, guava, grape, mango, peppermint; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, meat products, frozen dairy products.

2. ACETIC ACID - FDA GRAS; FEMA GRAS; found in Apple, banana, beer, beef, bread, celery, cheese, cocoa, coffee, cognac, grape, grapefruit, lemon, lime, maple syrup, onion, orange juice, pea, peach, pineapple, raspberry, Jamaican rum, strawberry, soy sauce, whiskey, apple juice, apricot, blue cheese, blueberries; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum.

3. ACETOIN - FDA GRAS; FEMA GRAS; found in Apple, banana, beef, beer, bread, butter, cauliflower, cheese, cocoa, coffee, cranberry, grape, honey, mango, pear, pea, plum, sweet potato, raspberry, tomato, vinegar, wine, yogurt, asparagus, black currants, blackberry, wheat, broccoli, brussel sprouts, cantaloupe; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, shortening, candy, gelatin & puddings, chewing gum, cottage cheese, margarine.

4. ACETOPHENONE - FDA approved food additive; FEMA GRAS; found in Apple juice, blackberry, cheese, cocoa, cranberry, black currant, roasted filbert, grape, milk, olive, roasted onion, pea, roasted peanut, potato chip, raspberry, soy products, strawberry, tea, tomato, wine, apricot, banana, beef, cashew apple, cauliflower; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

5. 6-ACETOXYDIHYDROTHEASPIRANE - FEMA GRAS; Nature identical by FEMA; used in Baked goods, instant coffee/tea, snacks, soups, seasonings, meat products.

6. 2-ACETYL-3-ETHYLPYRAZINE - FEMA GRAS; found in Pork liver, pork; used in Non-alcoholic beverages, ice cream, ices, baked goods, cereals, candy, gelatin & puddings, milk, soups.

7. 2-ACETYL-5-METHYLFURAN - FEMA GRAS; found in Coffee, roasted filbert, tomato juice; used in Soups, nut products, snack foods, gravies.

8. ACETILPYRAZINE - FEMA GRAS; found in Nuts, beef, coffee, popcorn, sesame seed, almond, bread, wheat, cocoa, peanut, pork, potato chips; used in Non-alcoholic beverages, ice cream, ices, baked goods, frozen dairy products.

9. 2-ACETYLPIRIDINE - FEMA GRAS; found in Bean, cocoa, coffee, roasted peanut, potato chip, tea, beer, bread, wheat, hazelnut, lamb/mutton, potato; used in Non-alcoholic beverages, ice cream, ices, baked goods, meats, cereal, candy, gelatin & puddings, dairy products, condiments, soups.

10. 3-ACETYLPIRIDINE - FEMA GRAS; found in Roasted filbert, cocoa; used in Non-alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.

11. 2-ACETHIAZOLE - FEMA GRAS; found in Beef broth, bean, cocoa, potato, cooked pork liver, artichoke, asparagus, beef, beer, brazil nuts, rice, boiled shrimp; used in Non-alcoholic beverages, ice cream, ices, protein foods, candy, chewing gum, snack foods.

12. ACONITIC ACID - FDA GRAS; FEMA GRAS; found in Beet root, sugarcane, leaves of Aconitum napellus, apple, beer, orange juice, pear, tomato, vinegar; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, dairy products.

13. DL-ALANINE - FDA approved food additive; found in Apple, beef, carob, pea, soybean, wine, zucchini; used in Total protein level in finished product should not exceed 6.1%.

14. ALFALFA EXTRACT - FDA GRAS; FEMA GRAS; found in Alfalfa (*Medicago sativa* L.); used in Baked goods.

15. ALLSPICE EXTRACT, OLEORESIN, AND OIL - FDA GRAS; FEMA GRAS; found in *Pimenta officinalis* Lindl; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, soup, candy, chewing gum, meat, condiments, pickles.

16. ALLYL HEXANOATE - FDA approved food additive; FEMA GRAS; found in Pineapple, baked potato; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

17. ALLYL IONONE - FDA approved food additive; FEMA GRAS; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, jellies.

18. ALMOND BITTER OIL - FDA GRAS; FEMA GRAS; found in Almond, apricot, peach kernel; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, cherries.

19. AMBERGRIS TINCTURE - FDA GRAS; FEMA GRAS; found in *Physeter macrocephalus* L. and *Pheyster catodon*; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

20. AMMONIA - Occurs in human/animal breath due to protein metabolism; formed by dissolving ammonium salts (GRAS) in water; however, dissolved in water it is a naturally occurring substance that plays a vital role in protein metabolism in animals, including man

21. AMMONIUM BICARBONATE - FDA GRAS; Prepared by reacting gaseous carbon dioxide with aqueous ammonia; used in food, baking powder formulations, cocoa products and as a pH control agent, texturizer, dough strengthener; baked goods.

22. AMMONIUM HYDROXIDE - FDA GRAS; a naturally occurring substance that plays a vital role in protein metabolism in animals; ammonia found in breath of humans/animals; cured pork
; Approved for use in all foods (generally recognized as safe) as a leavening agent, pH control agent, surface-finishing agent at levels in food which do not exceed current good manufacturing practices.

23. AMMONIUM PHOSPHATE DIBASIC - FDA GRAS; found in Ammonia occurs in human/animal breath; phosphates are components of all living organisms; Used in food with no limitation other than current GMP, used as a dough strengthener, firming agent, leavening agent, pH control agent, processing aid, alcoholic beverages, ice cream, ices, gelatin & puddings

24. AMMONIUM SULFIDE - FEMA GRAS; used in Baked goods, meat products, gravies, condiments.

25. AMYL ALCOHOL - FDA approved food additive; FEMA GRAS; found in Apple, banana, bean, beef fat, beer, bilberry, cheese, cherry, chicken, cognac, coffee, cranberry, black currant, grape, pineapple, potato, raspberry, rum, strawberry, tea, tomato, vinegar, watermelon, wine; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

26. AMYL BUTYRATE - FDA approved food additive; FEMA GRAS; found in Apple, banana, beer, cocoa, apple juice, apricots, strawberries, wine; used in Non-alcoholic beverages, ice cream, ices, baked goods, syrups, candy, gelatin & puddings, chewing gum.

27. AMYL FORMATE - FDA approved food additive; FEMA GRAS; found in Apple, strawberry, brandy, honey, tomatoes, whiskey; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.

28. AMYL OCTANOATE - FDA approved food additive; FEMA GRAS; found in Strawberry, apple, cognac; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.

29. ALPHA-AMYL CINNAMALDEHYDE - FDA approved food additive; FEMA GRAS; Nature identical by FEMA; black tea, olibanum; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods, chewing gum.

30. AMYRIS OIL - FDA approved food additive; found in Amyris balsamifera L., brandies, liqueurs, amyris balsamifera; used in Limited application in flavors such as oriental specialties, brandies, liqueurs, oriental specialties.

31. TRANS-ANETHOLE - FDA GRAS; FEMA GRAS; found in Anise, cheese, chicken broth, fennel oil, tea, basil, apple, chicken, licorice; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, chewing gum, baked goods.

32. ANGELICA ROOT EXTRACT, OIL AND SEED OIL - FDA GRAS; FEMA GRAS; found in Angelica archangelica L.; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, syrup.

33. ANISE, ANISE STAR AND OILS - FDA GRAS; FEMA GRAS; found in Fruit of the anise plant (*Pimpinella anisum* L.), Star anise; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, meats, condiments.

34. ANISYL ACETATE - FDA approved food additive; FEMA GRAS; found in Cassie oil, currant; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

35. ANISYL ALCOHOL - FDA approved food additive; FEMA GRAS; found in Anise, cassie oil, vanilla bean, honey, tomato; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.

36. ANISYL FORMATE - FDA approved food additive; FEMA GRAS; found in Vanilla fragrans and Ribes sp.; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.

37. ANISYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; found in Honey; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.

38. APPLE JUICE CONCENTRATE, EXTRACT, AND SKINS - found in Apple; used in Juices, baked goods.

39. APRICOT EXTRACT AND JUICE CONCENTRATE - found in Apricot; used in Condiments.

40. L-ARGININE - FDA approved food additive; found in Structural unit of food protein; Not to exceed 6.1 % by weight of the total protein of the finished food.

41. ASAFETIDA FLUID EXTRACT AND OIL - FDA GRAS; FEMA GRAS; found in Ferula assafoetida L.; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, soups, meats.

42. ASCORBIC ACID - FDA GRAS; FEMA GRAS; found widely distributed in the plant and animal kingdom, citrus fruit, tea leaves; used in Non-alcoholic beverages, alcoholic beverages, baked goods, sweet sauce, soups, candy, gelatin & puddings, dairy products, jam/jelly, gravies.

43. L-ASPARAGINE MONOHYDRATE - FDA approved food additive; found in structural unit of food protein, licorice; Hydrated form of asparagine, not to exceed 7.0% by weight of the total protein of the finished product.

44. L-ASPARTIC ACID - FDA approved food additive; FEMA GRAS; found in structural unit of food protein, sugar cane, sugar beet, molasses; licorice; not to exceed 7.0% by weight of the total protein of the finished product; used in meat products, condiment relish; seasonings.

45. BALSAM PERU AND OIL - FDA GRAS; FEMA GRAS; found in Bark from large trees (Myroxylan pereiae Klotzsch) found in El Salvador, peru balsam; used in Non-alcoholic beverages, ice cream, ices, baked goods, syrups, candy, gelatin & puddings, chewing gum.

46. BASIL OIL - FDA GRAS; FEMA GRAS; found in *Ocimum basilicum*; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, meats.

47. BAY LEAF, OIL AND SWEET OIL - FDA GRAS; FEMA GRAS; found in *Pimenta racemosa*, bay leave; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, meat, soup.

48. BEESWAX WHITE - FDA GRAS; FEMA GRAS; found in honey beehive; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, honey.

49. BEET JUICE CONCENTRATE - Beets are included among "Miscellaneous Vegetables" in FDA Standards of Identity and are also covered by a USDA Standards for Grades.

50. BENZALDEHYDE - FDA GRAS; FEMA GRAS; found in Apple juice, baked chicken, cheddar cheese, coffee, cranberry juice, concord grape, honey, milk, orange, pea, roast beef, tomato, white bread, almond, apricot, artichoke, asparagus, beans, beef, beer; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

51. BENZALDEHYDE GLYCERYL ACETAL - FDA approved food additive; FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

52. BENZOIC ACID - FDA GRAS; FEMA GRAS; found in Clove, cinnamon, vetiver oil, ylang-ylang, strawberry, tea, wine, apple, beer, bread, cherry, cocoa bean, cranberry, grape must, honey, heated lamb, pork fat, raspberry, rum; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, cheese, preservative, candy, gelatin & puddings, chewing gum, icings, condiment relish.

53. BENZOIN - FDA approved food additive; FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

54. BENZOIN RESIN - FDA approved food additive; FEMA GRAS; found in *Styrax* tree (*Stryrox tonkinensis*); used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

55. BENZOPHENONE - FDA approved food additive; FEMA GRAS; found in Grape, peach, apple, papaya; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, frozen dairy products.

56. BENZYL ALCOHOL - FDA approved food additive; FEMA GRAS; found in Apricot, basil oil, snap bean, beef, beer, bread, sour cherry, chicken broth, clove oil, cocoa, cranberry, roasted filbert, grape, honey, mushroom, passion fruit, nuts, potato, raspberry, strawberry, tea, tomato, wine, yogurt, watermelon, almonds, apple, apple juice, asparagus, bananas, black currants, blackberries; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

57. BENZYL BENZOATE - FDA approved food additive; FEMA GRAS; found in Cassia oil, celery, cinnamon bark, cranberry, parsley, black currants, butter, guava, pineapple, papaya; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy.

58. BENZYL BUTYRATE - FDA approved food additive; FEMA GRAS; found in Passion fruit, tea, apple, apple juice, apricot, banana, parmesan cheese, grape, honey, mango, melon, muskmelon, orange juice, papaya; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

59. BENZYL CINNAMATE - FDA approved food additive; FEMA GRAS; found in Peruvian balsam oil, Tolu balsam oil; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

60. BENZYL PROPIONATE - FDA approved food additive; FEMA GRAS; found in Strawberry; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

61. BENZYL SALICYLATE - FDA approved food additive; FEMA GRAS; found in Cranberry, apple flowers; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.

62. BERGAMOT OIL - FDA GRAS; FEMA GRAS; found in Bergamot orange, Citrus bergamiz Risso, *C. aurantium* L.; used in Non-alcoholic beverages, ice cream, ices, baked goods, icings, candy, gelatin & puddings, chewing gum, alcoholic beverages.

63. BISABOLENE - FEMA GRAS; found in Basil oil, bergamot oil, cardamon oil, carrot, ginger, hops, lemon oil, lime oil, pepper, peppermint oil, guava,

mango; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, preserves & spreads, candy, gelatin & puddings, baked goods.

64. BLACK CURRANT BUDS ABSOLUTE - FDA approved food additive; FEMA GRAS; found in *Ribes nigrum* L.; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.

65. BORNEOL - FDA approved food additive; FEMA GRAS; found in Basil, carrot, ginger, orange juice, peppermint oil, sage, thyme, lavender oil, 250 plants/herbs like Compositae and Lauraceae, blackberries, brandy, grapes, cocoa; used in Non-alcoholic beverages, ice cream, ices, baked goods, syrup, candy, gelatin & puddings, chewing gum, dairy products.

66. BORNYL ACETATE - FDA approved food additive; FEMA GRAS; found in Basil oil, carrot, galbanum oil, ginger oil, nutmeg, orange juice, peppermint oil, rosemary, thyme, black currants, gin, ginger, kiwi fruit, pistacia, plum, sweet potato, soy sauce, black & green tea; used in Non-alcoholic beverages, ice cream, ices, baked goods, syrups, candy, gelatin & puddings, chewing gum.

67. BUCHU LEAF OIL - FDA approved food additive; FEMA GRAS; found in *Barosma* sp.; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, condiments, baked goods.

68. 1,3-BUTANEDIOL - FDA approved food additive; No natural occurrence cited; Approved for adhesives and packaging material used in contact with food.

69. 2,3-BUTANEDIONE - FDA GRAS; FEMA GRAS; found in Apple, bean, beef, beer, bread, butter, cabbage, cauliflower, celery, cheese, cooked chicken, cocoa, coffee, cranberry, cream, grape, honey, milk, orange juice, peanut, peppermint, pineapple, popcorn, raspberry, strawberry, tomato, wine, yogurt; used in Non-alcoholic beverages, ice cream, ices, baked goods, shortening, candy, gelatin & puddings, chewing gum.

70. 1-BUTANOL - FDA approved food additive; FEMA GRAS; found in Brazilian peppermint oil, tea, apple juice, banana, beef roast, beer, celery, cheese (cheddar & Swiss), cooked chicken, grape, orange, peach, green pea, pear, potato, raspberry, rum, strawberry, tomato, sherry wine; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, cream, baked goods.

71. 2-BUTANONE - FDA approved food additive; FEMA GRAS; found in Apple, apple juice, apricot, banana, cooked beef, brussel sprouts, cabbage, carrot, cauliflower, celery, chicken, coffee, nuts, fish, grape, honey, milk, onion, orange

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juice, pear, potato chip, rum, tea, tomato, wine, yogurt; used in Non-alcoholic beverages, ice cream ices, candy, baked goods.

72. 4(2-BUTENYLIDENE)-3,5,5-TRIMETHYL-2-CYCLOHEXEN-1-ONE - found in Flue-cured and Turkish tobacco.

73. BUTTER, BUTTER ESTERS, AND BUTTER OIL - FDA approved food additive; FEMA GRAS; Naturally occurring fatty acids and esters in butter; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, popcorn oil, toppings, frozen dairy products.

74. BUTYL ACETATE - FDA approved food additive; FEMA GRAS; found in Apple, banana, beer, black currant, cheese, grape, nuts, pear, raspberry, rum, strawberry, tomato, wine, apricot, blackberry, brandy, cantaloupe; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, cheeses.

75. BUTYL BUTYRATE - FDA approved food additive; FEMA GRAS; found in Apple, banana, grape, wine, apricot, blackberry, brandy, parmesan cheese, honey, mango, melon, muskmelon, orange juice, papaya; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

76. BUTYL BUTYRYL LACTATE - FDA approved food additive; FEMA GRAS; found in Sweet sauces; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, cheese, sweet sauces.

77. BUTYL ISOVALERATE - FDA approved food additive; FEMA GRAS; found in Banana, apple, apricot, banana, parmesan cheese, olives, pear, plum, strawberry, wine; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.

78. BUTYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; found in Beer, grape, passion fruit, strawberry, wine, papaya, alfalfa; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, frozen dairy.

79. BUTYL UNDECYLENATE - FDA approved food additive; FEMA GRAS; No natural occurrence cited; No limitation for use in food other than good manufacturing practices.

80. 3-BUTYLIDENEPHTHALIDE - FEMA GRAS; found in Lovage root oil, *Ligusticum acutilobum*, celery, celery stalk; used in Baked goods, soups, condiments, meats.

81. BUTYRIC ACID - FDA GRAS; FEMA GRAS; found in Apple, apple juice, banana, beef, beef roast, blackberry juice, blueberry juice, cheese (cheddar, romano, roquefort), cocoa, cognac, grape, grapefruit, lemon, orange, pear, pineapple, raspberry, strawberry, rum, beer, black currants, blackberry, blueberries, bread, wheat, butter; used in Non-alcoholic beverages, ice cream, ices, baked goods, margarine, candy, gelatin & puddings, chewing gum, snack foods.

82. CADINENE - FDA approved food additive; found in Lemongrass oil, citronella oil, ylang-ylang oil, anise, basil, bilberry, black currant, grapefruit, hops, mint, orange juice, parsley, peach, pepper, peppermint, sage, tea, thyme; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, meat products.

83. CAFFEINE - FDA GRAS; FEMA GRAS; found in Coffee, tea, mate, cola nut; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.

84. CALCIUM CARBONATE - FDA GRAS; No natural occurrence cited; No limitation for use in food other than good manufacturing practices.

85. CAMPHENE - FDA approved food additive; FEMA GRAS; found in Pepper, peppermint oil, thyme, spearmint, bay leaf, basil oil, carrot, cheddar cheese, ginger, grapefruit, nutmeg, orange, lemon oil, apricot, black currants, blackberry, celery, cranberry, custard apple, gin, kiwi fruit; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.

86. CANANGA OIL - FDA GRAS; FEMA GRAS; found in Cananga flower extract; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

87. CAPSICUM OLEORESIN - found in Pepper, dried ripe fruit of *Capsicum frutescens* L.; used in Non-alcoholic beverages, baked goods, condiments, candy, chewing gum, meats.

88. CARAMEL COLOR - FDA GRAS; FEMA GRAS; Formed on heating of sugars; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, syrup, candy, gelatin & puddings, gravies, meats.

89. CARAWAY OIL - FDA GRAS; FEMA GRAS; found in Fruit of *Carum carisi* L., caraway seeds; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments.

90. CARBON DIOXIDE - FDA GRAS; Naturally carbonated water (spring water); important part of the air we breath; used in Leavening agent, a propellant, aerating agent, gas, carbonation of beverages. Non-alcoholic beverages, alcoholic beverages, meat products, processed fruits, juices & drinks, dairy products.

91. CARDAMOM OLEORESIN, EXTRACT, SEED OIL, AND POWDER - FDA GRAS; FEMA GRAS; found in the seeds of *Elettaria cardamomum*; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, pickles, candy, meats, chewing gum, condiments.

92. CAROB BEAN AND EXTRACT - FDA GRAS; FEMA GRAS; found in *Ceratonia siliqua* L. bean, carob beans; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, icings & toppings.

93. BETA-CAROTENE - FDA GRAS; found in Carrot, mango, pumpkin, dairy products, liver, kale, spinach, green cabbage, pepper, broccoli, brussel sprouts, acorn squash, sweet potato, tomato; used in Used as nutritional supplements with no limitation other than current good manufacturing practices, processed fruit & fruit juices, fats & oils, dairy product analogs.

94. CARROT OIL - FDA GRAS; FEMA GRAS; found in Carrot seed, carrots; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, soups.

95. CARVACROL - FDA approved food additive; FEMA GRAS; found in Basil, marjoram, pepper, peppermint oil, spearmint, tea, thyme; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum.

96. 4-CARVOMENTHENOL - FDA approved food additive; FEMA GRAS; found in Star anise oil, basil, bay leaves, carrot, celery seed, cocoa powder, cranberry juice, black currants, roasted filbert, grape, grapefruit, honey, hops, lemon oil, lime oil, loganberry, nuts, nutmeg, orange, orange juice, passion fruit, pepper, pineapple, saffron, tea, thyme, wine; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatin & puddings, chewing gum.

97. L-CARVONE - FDA GRAS; FEMA GRAS; found in Celery, dill, nuts, grapefruit juice, honey, hop oil, lemon essence, lime oil, mint, orange, orange juice, pepper, peppermint, spearmint, beer, cherries, endives, guava, hazelnuts,

honey, hops; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, condiments.

98. BETA-CARYOPHYLLENE - FDA approved food additive; FEMA GRAS; found in Basil oil, beer, carrot, celery, cocoa powder, black currants, ginger, grapefruit, guava, hops, lemon, mint, nutmeg, orange, orange juice, parsley, pepper, peppermint, pimento, sage, tea, thyme, artichoke, banana, cashews, apples, celery, chervil, chicken, cocoa; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, condiments.

99. BETA-CARYOPHYLLENE OXIDE - FDA approved food additive; found in Citrus fruit, mint, pepper, hop oil, beer, wild & sweet marjoram, ginger, coriander seed, rosemary; used in Approved for use as a flavoring agent in the minimum quantity required to produce the intended effect, and otherwise in accordance with principles of good manufacturing practices.

100. CASCARILLA OIL AND BARK EXTRACT - FDA GRAS; FEMA GRAS; found in Croton eluteria Benn.; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, condiments.

101. CASSIA BARK OIL - FDA GRAS; FEMA GRAS; found in Cinnamon tree, cassia; used in Non-alcoholic beverages, ice cream, ices, baked goods, meats, candy, chewing gum, condiments, meat products.

102. CASSIE ABSOLUTE AND OIL - FDA approved food additive; FEMA GRAS; found in Cassie, cassia; used in Soft candy, meat products, baked goods, ice cream.

103. CASTOREUM EXTRACT, TINCTURE AND ABSOLUTE - FDA GRAS; FEMA GRAS; found in Natural extract, Castor (beavers); used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, chewing gum, toppings.

104. CEDAR LEAF OIL - FDA approved food additive; FEMA GRAS; found in Cedar tree; used in Alcoholic beverages, meats, candy.

105. CEDARWOOD OIL TERPENES AND VIRGINIANA - FDA approved food additive; found in the wood of Juniperus virginian L., clary sage oil, costum, lavender, Cedarwood; Approved for use as a flavoring agent in the minimum quantity required to produce the intended effect, and otherwise in accordance with principles of good manufacturing practices.

106. CEDROL - FDA approved food additive; found in Cypress wood, cedar wood; used in Alcoholic beverages, meat products.

107. CELERY SEED EXTRACT, SOLID, OIL, AND OLEORESIN - FDA GRAS; FEMA GRAS; found in Celery seeds, celery; used in Baked goods, meat products, gravies, meats, soups, condiments, pickles.

108. CELLULOSE FIBER - Natural polysaccharide which is the most abundant carbohydrate in nature; found in all plant material; Food industry use as stabilizer, thickener, and texturizer at levels as high as 8-12% in food/drugs; grated cheese, fruit preserves/jams, fruit jellies.

109. CHAMOMILE FLOWER OIL AND EXTRACT - FDA GRAS; FEMA GRAS; found in the flower of *Anthemis nobilis*, Chamomile flowers, German Chamomile flowers; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, chewing gum, baked goods, gelatins & puddings.

110. CHICORY EXTRACT - FDA GRAS; FEMA GRAS; found in Chicory; used in Frozen dairy, baked goods, non-alcoholic beverages, ice cream.

111. CHOCOLATE - FDA GRAS; common food item.

112. CINNAMALDEHYDE - FDA GRAS; FEMA GRAS; found in Essential oil of cinnamon, beer, brandy, peanut, tea, tomato, wine, blueberries, cantaloupe, capers, cranberries, gin, guava, melon; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum, meat, gravies.

113. CINNAMIC ACID - FDA approved food additive; FEMA GRAS; found in Beer, blackberry, "Brandy-grape", Burley tobacco, Capers, Carambola (Starfruit), Cherimoya, Cherry, "Cherry sour", Cloudberry, Grape, Guava, Hog plum (*Spondias mombims* L.), Loquat, Malt, Mango, Mushroom, Oriental tobacco, Passion fruit, Strawberry; used in Soft candy.

114. CINNAMON LEAF OIL, BARK OIL, AND EXTRACT - FDA GRAS; FEMA GRAS; found in Cinnamon tree; used in Baked goods, jam jelly, frozen dairy, chewing gum, candy, meats, condiments, pickles.

115. CINNAMYL ACETATE - FDA approved food additive; FEMA GRAS; found in Cassia oil, cinnamon bark & leaf oil, guava; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, condiments.

116. CINNAMYL ALCOHOL - FDA approved food additive; FEMA GRAS; found in Apple flowers, Bilberry, Blackberry, Blueberry, Burley tobacco, Cantaloupe, "Cherry sour", Cloudberry, Cranberry, Guava, Melon, Raspberry, Rose-apple, Strawberry, Tapereba, Watermelon (*Citrullus vulgaris*); used in Non-alcoholic beverages.

117. CINNAMYL CINNAMATE - FDA approved food additive, FEMA GRAS; found in Davana oil, storax; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

118. CINNAMYL ISOVALERATE - FDA approved food additive; FEMA GRAS; found in Chestnut flowers; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

119. CINNAMYL PROPIONATE - FDA approved food additive; FEMA GRAS; used in Hard candy.

120. CITRAL - FDA GRAS; FEMA GRAS; found in Grapefruit juice, orange, orange juice, tomato, celery, lime oil, apricot, black currants, grape, hops, kiwi fruit, mango, mango ginger, melon, plum, raspberry, rum; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.

121. CITRIC ACID - FDA GRAS; FEMA GRAS; found in Onions, spinach; used in Fruit juice.

122. CITRONELLA OIL - FDA GRAS; FEMA GRAS; found in the dried leaves of citronella grasses, *Cymbopogon nardus* & *Andropogon nardus*; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, alcoholic beverages.

123. DL-CITRONELLOL - FDA approved food additive; FEMA GRAS; found in Apple, Apple juice, Apricot, Beer, Black currants, Blackberry, Blueberry, "Brandy-grape", "Brandy-plum", Burley tobacco, Curuba fruit, Elderberry, Gin, Grape, Honey, Litchi, Loquat, Orange juice, Passion fruit, Pawpaw fruit (*Asimina triloba* Dunal.), Peach, Peppermint, Rum, Strawberry, "Tea - Black & Green", Tomato, Wine, Tobacco, peach; used in Soft candy.

124. CITRONELLYL BUTYRATE - FEMA GRAS; found in Passion fruit, Tomato; used in Baked goods, candy, gelatins, puddings, non-alcoholic beverages.

125. CITRONELLYL ISOBUTYRATE - FEMA GRAS; used in Baked goods.

126. CIVET ABSOLUTE - FDA GRAS; FEMA GRAS; Natural extract, civat cat; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum.

127. CLARY OIL - FDA GRAS; FEMA GRAS; found in the leaves and flowering tops of *Salvia scarea*, clary sage; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatins & puddings, chewing gum, condiments.

128. CLOVER TOPS, RED SOLID EXTRACT - FDA GRAS; FEMA GRAS; found in Clover flowers; used in Jam jelly.

129. COCOA, COCOA SHELLS, EXTRACT, DISTILLATE AND POWDER - FDA GRAS; found in the seed pods of *Theobroma cacao* L. tree, cocoa shells, cocoa; Regulated as a food. Requirements for specific standardized cocoa products under 21 CFR 163; baked goods.

130. COCONUT OIL - found in Coconut; used in Edible oil in shortening and confectionery fat (candies, chocolate, synthetic cocoa butter). Use in food products.

131. COFFEE - FDA GRAS; found in Coffee spp.; used in Non-alcoholic beverages, baked goods, candy, syrups.

132. COGNAC WHITE AND GREEN OIL - FDA GRAS; FEMA GRAS; found in Wine lees, cognac brandy; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, condiments.

133. COPAIBA OIL - FDA approved food additive; found in Copaiba; FDA Direct.

134. CORIANDER EXTRACT AND OIL - FDA GRAS; FEMA GRAS; found in Fruit of a plant (*Cariandrum sativum* L.) from the Middle East with a warm pleasant odor, coriandar; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, meats, condiments.

135. CORN OIL - found in Corn.

136. CORN SILK - FDA GRAS; FEMA GRAS; found in Corn; used in Baked goods.

137. COSTUS ROOT OIL - FDA approved food additive; FEMA GRAS; found in Costus root; used in Alcoholic beverages, candy, baked goods.

138. CUBEB OIL - FDA approved food additive; FEMA GRAS; found in Piper cubebs; used in Condiment relish.

139. CUMINALDEHYDE - FDA approved food additive; FEMA GRAS; found in Beef, black currants, honey, mango, bonito, brandy, grape, pistacia, fruit; used in Soft candy, gelatin & puddings, baked goods, chewing gum, frozen dairy products.

140. PARA-CYMENE - FDA approved food additive; FEMA GRAS; found in Apricot, banana, beans, beli, bittermelon vine, black currants, blackberry, "Brandy apple", butter, "butter heated", capsicum peppers, carrots, celery, "celery stalk fresh", cherimoya, "chicken meat roasted", "chicken roasted", cocoa, "coffee roasted", chicken skin roasted, cranberry, "crayfish boiled", curuba fruit, custard apple (Bullock's heart), faham leaves, gin, ginger, grape, guava, "hazelnut roasted", honey, hops, kiwi fruit, licorice, litchi, loquat, "macadamia nut roasted", mango, mango ginger, "mate green", "mate roasted", mentha arvensis oil, milk, mushroom, "mushroom (M. oreades) dried", nectarine, oat groats, orange juice, ouzo, paprika, parsley, passion fruit, peach, "peanut roasted", peppermint, "pistacia fruit", plum mirabelle, raspberry, "rice cooked", rum, "salami dry", soursop, "spearmint native", "spearmint scotch", "tea black & green", tomato, tomato paste, Virginia tobacco, wine; used in Chewing gum.

141. L-CYSTEINE - FDA GRAS; FEMA GRAS; found in Pippali fruit (India); used in Condiment relish.

142. DANDELION ROOT SOLID EXTRACT - FDA GRAS; FEMA GRAS; found in Dandelions; used in Baked goods.

143. DAVANA OIL - FDA approved food additive; FEMA GRAS; found in Artemisia plant; used in Alcoholic beverages.

144. 2-TRANS,4-TRANS-DECADIENAL - FDA approved food additive; FEMA GRAS; found in Beef, roast, meat & drippings, bilberry, boiled chicken, chicken broth, cranberry, country cured ham, lingonberry, green pea, roasted peanut, potato chip, black tea, tomato; used in Non-alcoholic beverages, vegetables, ice cream, ices, baked goods, meats, meat sauces, candy, gelatin & puddings, chewing gum, cereals.

145. DELTA-DECALACTONE - FDA approved food additive; FEMA GRAS; found in Apricot, beef fat, butter, cheese, milk, peach, pork, rum, tea, yogurt, beef, black currants, blackberry, blue cheese, cheddar cheese, chicken, coconut, cranberry, cream

; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, margarine, baked goods, toppings.

146. GAMMA-DECALACTONE - FDA approved food additive; FEMA GRAS; found in Apricot, roasted barley, beef fat, bilberry, butter, mango, milk fat, orange, passion fruit, peach, plum, rum, strawberry, tea, beer, blue cheese, grape brandy, plum brandy, bread, wheat, cantaloupe, cheese; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods, frozen dairy goods.

147. DECANAL - FDA GRAS; FEMA GRAS; found in Almond roasted, apple, apple flowers, apricot, "artichoke cooked", avocado, "beef cooked", "beef uncooked", beer, bilberry, black currants, blackberry, "bonito dried", "brandy grape", "bread wheat", butter, "butter heated", cabbage, cake white baked, cantaloupe, carambola (starfruit), carrots, cauliflower, "cauliflower cooked", caviar, celery, cheddar cheese, cherry, "cherry sour", "chicken cooked", "chicken fat roasted", "chicken heated (in water)", chicken meat roasted, "chicken roasted", "chicken skin roasted", chive, "clam steamed", cocoa, coconut, cowberry (lingonberry), "crab blue heated", cranberry, "crayfish boiled", cucumber, egg, "egg yolk cooked", elderberry juice, endive, fish, gin, ginger, grape, grapefruit juice, guava, "ham dry cured", "hazelnut roasted", honey, hops, krill, kumazasa, "lamb/mutton cooked", litchi, loganberry, loquat, "mate green", melon, milk, "mushroom (M. oreades) dried", muskmelon (cucumis melo L.), "oats roasted oil", orange juice, oriental tobacco, papaya, "papaya mountain", "peanut oil heated", "peanut roasted", plum, "plum mirabelle", "pork cooked", potato, "potato baked", "potato sweet cooked", red currants, "rice cooked", rum, "salami dry", strawberry, tomato, tomato paste, Virginia tobacco, wine; used in Baked goods.

148. DECANOIC ACID - FDA approved food additive; FEMA GRAS; found in Apple, beer, cheese (bleu, Romano), grape, grapefruit, country ham, lemon oil, orange juice, peanut, potato, Jamaican rum, tomato, whiskey, apple flowers, banana, beef, beer, blackberries, blue cheese, brandies, bread, wheat, butter, heated butter; used in Non-alcoholic beverages, baked goods, snack foods, candy, gelatin & puddings, dairy products.

149. 1-DECANOL - FDA approved food additive; FEMA GRAS; found in Apple, apple flowers, apple juice, apricot, asparagus, babaco fruit, banana, "beef cooked", beer, bilberry, bilberry wine, blackberry, "brandy apple", "brandy grape", "brandy plum", "brandy raspberry", butter, "butter heated", carambola (starfruit), celery, cherimoya, "cherry sour", cranberry, "crayfish boiled", endive, faham leaves, grape, grapefruit juice, guava, hops, kumazasa, "mate green", "mate roasted", milk, mushroom, muskmelon (cucumis melo L.), olive, orange

juice, papaya, "papaya mountain", peach, "peanut oil heated", "pear Asian", "pork cooked", rum, "spearmint scotch", strawberry, strawberry wine, tamarind, Virginia tobacco, whiskey, wine; used in Frozen dairy goods.

150. 2-DECENAL - FDA approved food additive; FEMA GRAS; found in Bacon fat, beef roast, carrot root, cooked chicken, cured ham, orange, potato chip, soybean; used in Non-alcoholic beverages, alcoholic beverages, baked goods, candy, gelatin & puddings, dairy products.

151. DEHYDROMENTHOFUROLACTONE - FEMA GRAS; used in Chewing gum.

152. DIETHYL MALONATE - FDA approved food additive; FEMA GRAS; found in Passion fruit, whiskey, wine, blackberry, brandy, grape, strawberry wine; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, dairy products.

153. DIETHYL SEBACATE - FDA approved food additive; FEMA GRAS; used in Hard candy, chewing gum, candy baked goods.

154. 2,3-DIETHYLPYRAZINE - FEMA GRAS; found in Nuts, bread, wheat, hazelnut, baked potato, soy sauce; used in Non-alcoholic beverages, ice cream, ices, candy, gelatin & puddings.

155. DIHYDRO ANETHOLE - FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, dairy products, baked goods.

156. 5,7-DIHYDRO-2-METHYLTHIENO(3,4-D) PYRIMIDINE - FEMA GRAS; used in Breakfast cereals.

157. DILL SEED OIL AND EXTRACT - FDA GRAS; FEMA GRAS; found in Dill; used in Cheese, baked goods.

158. META-DIMETHOXYBENZENE - FDA approved food additive; FEMA GRAS; found in Brandy grape, "salami dry", filberts; used in Meat products.

159. PARA-DIMETHOXYBENZENE - FDA approved food additive; FEMA GRAS; found in Cherimoya, "tea black & green", hyacinth oil, peppermint oil; used in Gelatin pudding.

160. 2,6-DIMETHOXYPHENOL - GRAS; FEMA GRAS; found in Maple syrup, rum, smoked sausage, wine; used in Non-alcoholic beverages, seafood, meat, baked goods, candy, gelatin & puddings, soups.
161. DIMETHYL SUCCINATE - FDA approved food additive; FEMA GRAS; found in Blackberry, carambola (starfruit), hazelnut roasted; used in Hard candy.
162. 3,4-DIMETHYL-1,2-CYCLOPENTANEDIONE - FEMA GRAS; found in Coffee roasted; used in Nut products.
163. 3,5-DIMETHYL-1,2-CYCLOPENTANEDIONE - FEMA GRAS; found in Coffee roasted; used in Soft candy.
164. 3,7-DIMETHYL-1,3,6-OCTATRIENE - FDA approved food additive; FEMA GRAS; found in Apricot, black currants, capsicum peppers, carambola (starfruit), curuba fruit, custard apple (Bullock's heart), grapefruit juice, guava, "guava pineapple", hops, kiwi fruit, loquat, mango, mango ginger, mentha arvensis oil, nectarine, ouzo, papaya, paprika, parsley, parsnip root, passion fruit, pepino, peppermint, pineapple, "pistacia fruit", "salami dry", "spearmint native", "spearmint scotch", sweetsop, tapereba, "tea black & green", tobacco flowers (nicotiana species), tomato, tomato paste, ocimum basilicum L.; used in Frozen dairy goods.
165. 3,7-DIMETHYL-1,6-OCTADIENE-3-OL - FDA GRAS; FEMA GRAS; found in Banana, beer, cocoa, coffee, grapefruit, wine, lime oil, orange juice, pepper, pineapple, tea, tomato; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum, dairy products, meat.
166. 4,5-DIMETHYL-3-HYDROXY-2,5-DIHYDROFURAN-2-ONE - FEMA GRAS; found in Beef broth, aged saki, almond, asparagus, bread, wheat, butter, chicken, clam, steamed cocoa, coconut coffee, corn; used in Meat products, gravies, condiments, relishes, soups, baked goods, sweet sauce.
167. 6,10-DIMETHYL-5,9-UNDECADIEN-2-ONE - FDA approved food additive; FEMA GRAS; found in Beef, blackberry, brandy, cantaloupe, clams, corn, endive, grapefruit juice, ham, peppermint, tomato, spearmint, passion fruit, almond, asparagus, beans, beef, beer, cashew nuts, parmesan cheese, chicken; used in Non-alcoholic beverages, baked goods, candy, gelatin & puddings, dairy products.

168. 3,7-DIMETHYL-6-OCTENOIC ACID - FEMA GRAS; Constituent of Java citronella, geranium, peppermint oil; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.
169. 2,4-DIMETHYLACETOPHENONE - FDA approved food additive; FEMA GRAS; found in Bonito dried, "tea black & green", wine, coffee; used in Baked goods.
170. ALPHA, PARA-DIMETHYLBENZYL ALCOHOL - FEMA GRAS; found in Essential oil of *Curcuma longa* L.; used in Non-alcoholic beverages, ice cream, ices, candy.
171. ALPHA, ALPHA-DIMETHYLPHENETHYL ACETATE - FDA approved food additive; FEMA GRAS; found in Apricots, black currants, custard apple, grapefruit, pineapples, peppermint, nectarines; used in Soft candy.
172. ALPHA, ALPHA-DIMETHYLPHENETHYL BUTYRATE - FDA approved food additive; FEMA GRAS; found in Sake; used in Frozen dairy goods.
173. 2,3-DIMETHYLPYRAZINE - FEMA GRAS; found in Asparagus, peanut, popcorn, Virginia tobacco, coffee, potato; used in Gravies.
174. 2,5-DIMETHYLPYRAZINE - GRAS; FEMA GRAS; found in Nuts, barley, beef, bread, cocoa, coffee, mushroom, popcorn, potato, rum, soybean, tea, whiskey, blackberry, brandy, grape, cantaloupe, corn, endive, grapefruit juice; used in Non-alcoholic beverages, ice cream, ices, baked goods, meat, candy, gelatin & puddings, dairy products, breakfast cereal.
175. 2,6-DIMETHYLPYRAZINE - FEMA GRAS; found in Roasted almond, cooked beef, cocoa, coffee, egg, roasted filbert, dried mushroom, roasted peanut, potato chip, rum, tea, tomato, whiskey, citronella, camphor oil; used in Non-alcoholic beverages, ice cream, ices, baked goods, meat, meat sauces, candy, gelatin & puddings, dairy products, cereals, milk products.
176. DIMETHYLTETRAHYDROBENZOFURANONE - FEMA GRAS; found in Peppermint oil, dried bonito, black & green tea, wine; used in Chewing gum.
177. DELTA-DODECALACTONE - FDA approved food additive; FEMA GRAS; found in Beef fat, butter, cheese, milk, peach, pork fat, rum, beef, blue cheese, cheddar cheese, chicken, coconut, lamb/mutton, peach, plum, pork; used in Non-alcoholic beverages, alcoholic beverages, baked goods, toppings, candy, gelatin & puddings, meat products.

178. GAMMA-DODECALACTONE - FDA approved food additive; FEMA GRAS; found in Apricot, "beef cooked", beer, blackberry, blue cheese, butter, "butter heated", carambola (starfruit), cheddar cheese, chervil, "chicken fat roasted", coconut, guava, "lamb/mutton cooked", milk, naranjilla fruit, nectarine, papaya, passion fruit, peach, pineapple, plum, "pork cooked", quince, rum, strawberry, Swiss cheese, chicken; used in Baked goods.

179. PARA-ETHOXYBENZALDEHYDE - FDA approved food additive; FEMA GRAS; used in Baked goods.

180. ETHYL 10-UNDECENOATE - FDA approved food additive; FEMA GRAS; used in Baked goods.

181. ETHYL 2-METHYLBUTYRATE - FDA approved food additive; FEMA GRAS; found in Apple, apple juice, apricot, beer, bilberry, bilberry wine, blackberry, "brandy apple", "brandy grape", cantaloupe, cherry, cowberry, (lingonberry), cupuacu, durian, fig, grape, honeydew melon (*Cucumis inodorus* Nand.), melon, muskmelon (*cucumis melo* L.), naranjilla fruit, olive, orange juice, papaya, "papaya mountain", "pear Asian", peas, peppermint, pineapple, plum, prickly pear, quince, rum, "spearmint native", "spearmint scotch", strawberry, strawberry wine, wine; used in Hard candy.

182. ETHYL ACETATE - FDA GRAS; FEMA GRAS; found in Apple, apple flowers, apple juice, arctic bramble, babaco fruit, banana, beans, "beef cooked", beer, "beetroot cooked", beli, bilberry, bittermelon fruit, bittermelon vine, black currants, blackberry, blue cheese, blueberry, "bonito dried", "brandy apple", "brandy cherry", "brandy grape", "brandy plum", "brandy raspberry", Brazil nut, "bread wheat", broccoli, butter, cantaloupe, capsicum peppers, carambola (starfruit), cashew apple, "cauliflower cooked", cheddar cheese, cheese parmesan, cherimoya, cherry, "cherry sour", "cherry sweet", "chicken cooked", "chicken meat roasted", "chicken roasted", "chicken skin roasted", cloudberry, cocoa, "coffee roasted", "corn oil heated", cowberry (lingonberry), cranberry, cream, crispbread, cupuacu, dalieb fruit, "duck meat boiled", durian, elderberry juice, fig, gin, ginger, grape, guava, "guava pineapple", "ham cured", "hazelnut roasted", honey, honeydew melon (*cucumis inodorus* Nand.), kiwi fruit, kumazasa, leek, leek heated, loganberry, loquat, malt, mango, melon, milk, "milk pasteurized", muruci, mushroom, "mushroom (*M. oreades*) dried", "mushroom (*M. oreades*) fresh", muskmelon (*cucumis melo* L.), naranjilla fruit, nectarine, oat groats, olive, "onion roasted", ouzo, papaya, "papaya mountain", passion fruit, pawpaw fruit (*asimina triloba* dunal.), peach, "peanut roasted", pear, peas, pepino, peppermint,

- pineapple, plum, plum wine, popcorn, pork cooked, potato chips, "potato baked", prickly pear, pumpkin, quince, "radish fermented", raspberry, "rice cooked", rum, "rye sourdough crumb", sake, sherry, "soy sauce fermented", strawberry, tapereba, tea black & green, tomato, "trassi cooked", "truffles black fresh", "truffles black canned", vinegar, "vinegar sherry wine", "vinegar wine", Virginia tobacco, walnut, whiskey, wine, wood apple, yogurt, blueberries; used in Chewing gum.

183. ETHYL ACETOACETATE - FDA approved food additive; FEMA GRAS; found in Passion fruit, sherry, strawberry, wine; used in Soft candy.

184. ETHYL ALCOHOL - FDA GRAS; FEMA GRAS; found in Apple, banana, bean, blackberry, bread, brussel sprout, cabbage, cauliflower, cheese, cherry, coffee, cucumber, grape, onion, peach, peanut, pear, pea, pineapple, potato, raspberry, strawberry, tomato, watermelon; "Prior sanction for use in flavoring affirmed by FDA in communication to industry" - Food Chemical News Guide. Non-alcoholic beverages, alcoholic beverages, baked goods, gravies, candy, gelatin & puddings

185. ETHYL BENZOATE - FDA approved food additive; FEMA GRAS; found in Apple, apricot, arctic bramble, babaco fruit, banana, beer, beli, bilberry, bilberry wine, black currants, blackberry, "brandy apple", "brandy cherry", "brandy grape", "brandy pear", brandy plum", "brandy raspberry", "bread wheat", butter, cantaloupe, capers, carambola (starfruit), cashew apple, cherry "cherry sour", cloudberry, cocoa, cowberry (lingonberry), cranberry, dalieb fruit, grape, guava, "guava pineapple", honey, kiwi fruit, lulo fruit (Solanum vestissimum D.), melon, milk, mushroom, naranjilla fruit, olive, papaya, "papaya mountain", peach, peas, pineapple, plum, "plum mirabelle", quince, "rice cooked", rum, sapodilla fruit, sea buckthorn, "soy sauce fermented", strawberry, tapereba, vinegar, Virginia tobacco, whiskey, wine, bread, wheat, cantaloupe, corn (maize), melon; used in Gelatin pudding.

186. ETHYL BUTYRATE - FDA GRAS; FEMA GRAS; found in Apple, apple juice, banana, beer, cheddar cheese, cognac, cranberry, currant, grape, cured ham, olive oil, orange, passion fruit juice, roasted peanut, pineapple, Jamaican rum, whiskey, strawberry, apricot, beef, blue cheese, brandy; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

187. ETHYL CINNAMATE - FDA approved food additive; FEMA GRAS; found in Beer, blackberry, "brandy apple", "brandy grape", "brandy plum", capers, carambola (starfruit), "cherry sour", cocoa, cranberry, custard apple (Bullock's heart), guava, "guava pineapple", leek, loquat, muruci, passion fruit, peach, peas,

pineapple, plum, prickly pear, quince, rum, sea buckthorn, strawberry, strawberry wine, tamarind, tapereba, wine; used in Baked goods.

188. ETHYL DECANOATE - FDA approved food additive; FEMA GRAS; found in Cognac, grape, pear, pineapple, rye crisp bread, Jamaican rum, strawberry, black tea, whiskey, sherry wine, apple juice, apricot, banana, beef, bread, wheat, butter, cheddar cheese; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods, frozen dairy goods.

189. ETHYL FENCHOL - FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, ice cream, ices, baked goods, chewing gum, dairy products.

190. ETHYL FUROATE - found in Almonds, beer, guava fruit, papaya, white wine.

191. ETHYL HEPTANOATE - FDA approved food additive; FEMA GRAS; found in Apple, apricot, beer, bilberry wine, "brandy apple", "brandy grape", "brandy plum", butter, cashew apple, cocoa, grape, grapefruit juice, "hazelnut roasted", hops, "milk pasteurized", nectarine, olive, "papaya mountain", passion fruit, peach, pear Asian, peas, pineapple, plum, "pork cooked", prickly pear, quince, rum, sherry, strawberry, strawberry wine, whiskey, wine; used in Chewing gum.

192. ETHYL HEXANOATE - FDA approved food additive; FEMA GRAS; found in Apple, banana, beer, blue-cheddar-swiss cheese, cocoa, cognac, cream, grape, cured ham, orange juice, green pea, pineapple, rum, Jamaican rum, strawberry, maple syrup, tomato, watermelon, whiskey, beef, black currants, blackberry, brandies, broccoli; used in Non-alcoholic beverages, ice cream, ices, baked goods, jellies, candy, gelatin & puddings, chewing gum.

193. ETHYL ISOVALERATE - FDA approved food additive; FEMA GRAS; found in Pineapple, Russian champagne, banana, celery, grape, orange juice, pineapple rum, Jamaican rum, strawberry, watermelon, grape wine, apple, beer, brandy, cantaloupes, cashew apple, parmesan cheese; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum, jam jelly.

194. ETHYL LACTATE - FDA approved food additive; FEMA GRAS; found in Apple, beer, bread, cognac, cocoa, maple syrup, peas, pineapple, rum, sherry, whiskey, wine, apricot, bilberry wine, brandy, butter, capers, chicken, meat, elderberry, elderberry juice, grape, peas, plum; used in Non-alcoholic beverages,

alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods, chewing gum.

195. ETHYL LAURATE - FDA approved food additive; FEMA GRAS; found in Apple, beer, cheddar & Swiss cheese, cognac, Jamaican rum, rye crispbread, strawberry, black tea, whiskey, apricot, bilberry wine, blackberry, brandy, bread, wheat butter; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

196. ETHYL LEVULINATE - FDA approved food additive; FEMA GRAS; found in Bilberry wine, "brandy grape", "bread wheat", cherimoya, cocoa, "onion roasted", rum, wine; used in Frozen dairy goods.

197. ETHYL MALTOL - FDA approved food additive; FEMA GRAS; found in Apple juice; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, condiments, toppings, meat, candy, gelatin & puddings, chewing gum, desserts, soups, jellies, sweet sauce.

198. ETHYL METHYL PHENYLGLYCIDATE - FDA GRAS; FEMA GRAS; used in Condiment relish.

199. ETHYL MYRISTATE - FDA approved food additive; FEMA GRAS; found in Cheddar cheese, cognac, grape wine, Bartlett pear, Jamaican rum, rye crispbread, black tea, whiskey, muscat raisin wine; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, baked goods.

200. ETHYL NONANOATE - FDA approved food additive; FEMA GRAS; found in Apple, apricot, banana, "beef cooked", beer, bilberry wine, "brandy apple", "brandy grape", "brandy plum", "bread wheat", carambola (starfruit), cocoa, elderberry, elderberry juice, grape, nectarine, olive, peach, pineapple, plum, "pork cooked", prickly pear, quince, raisins, rum, sherry, strawberry wine, Virginia tobacco, whiskey, wine; used in Baked goods.

201. ETHYL OCTADECANOATE - FEMA GRAS; found in Grapes, grape brandy rum, whisky, Bantu beer, plum brandy, maple syrup; used in Non-alcoholic beverages, ice cream, ices, candy, alcoholic beverages.

202. ETHYL OCTANOATE - FDA approved food additive; FEMA GRAS; found in Apple, banana, beer, blue and cheddar cheese, Swiss cheese, chocolate, cocoa powder, cognac, grape, orange, pear, pineapple, Jamaican rum, strawberry, whiskey, apricot, bilberry wine, blackberry, brandy, bread, wheat, broccoli, butter, capers; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, frozen dairy goods.

203. ETHYL OLEATE - FDA approved food additive; FEMA GRAS; found in Currants, melons, grapes, brandy, rum, whisky, Bantu beer, maple syrup; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, condiments & relishes.

204. ETHYL PALMITATE - FEMA GRAS; found in Cheddar cheese, maple syrup, Jamaican rum, rye crispbread, whiskey, grape wine; used in Nut products.

205. ETHYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; found in Apple, rye crisp bread, cocoa, honey, olive oil, plum, tea, wine, beer, bel, bilberry wine, brandy, bread, wheat, cantaloupe, chempedak fruit, cocoa, grape, grapefruit juice, guava, licorice, melon; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, syrups.

206. ETHYL PROPIONATE - FDA approved food additive; FEMA GRAS; found in Apples, cocoa, Swiss cheese, grapes, grapefruit, oranges, peas, pears, pineapples, rum, strawberries, tea, wine, whisky, pork, apricot, banana, beer, bilberry, blackberry, brandy, cantaloupe, cheddar cheese, cocoa, fig, grape, guava; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, fats & oils, meat products, gravies.

207. ETHYL SALICYLATE - FDA approved food additive; FEMA GRAS; found in Currants, strawberries, grapes, raspberries, peppers, wine, blackberry, brandy, mountain papaya, rum; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum.

208. ETHYL TRANS-2-BUTENOATE - FDA approved food additive; FEMA GRAS; found in Apples, cocoa, strawberries, apple brandy, plum cantaloupe, cashews, dalieb fruit, grape, guava, kiwi fruit, mango papaya; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, puddings, gelatins & jams, alcoholic beverages.

209. ETHYL VALERATE - FDA approved food additive; FEMA GRAS; found in Apple, banana, cognac, grape, maple syrup, pea, pineapple, Jamaican rum, black tea, whiskey, apricot, bilberry wine, black currants, brandy, cashews, parmesan cheese, coffee, fig, guava, honey, kiwi fruit, melon, muskmelon; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

210. ETHYL VANILLIN - FDA GRAS; FEMA GRAS; found in Vanilla beans; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked

goods, imitation vanilla extract, candy, gelatin & puddings, chewing gum, chocolate, breakfast cereals.

211. 2-ETHYL(OR METHYL)-(3,5 AND 6)-METHOXYPYRAZINE - FEMA GRAS; found in Coffee, krill, potato sprouts & peel; used in Non-alcoholic beverages, ice cream, ices, baked goods, meat, meat sauces, candy, gelatin & puddings, cereal.

212. 2-ETHYL-1-HEXANOL - FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, ice cream, ices, candy, chewing gum.

213. 3-ETHYL-2-HYDROXY-2-CYCLOPENTEN-1-ONE - FEMA GRAS; found in Coffee, maple syrup, peanuts, pork; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, soups, cereals, meats & meat sauces, condiments, milk & dairy products.

214. 2-ETHYL-3,(5 OR 6)-DIMETHYLPYRAZINE - FEMA GRAS; found in Nuts, barley, beef, cocoa, coffee, bread, mushroom, popcorn, potato, rum, soybean, tea, whiskey; used in Non-alcoholic beverages, baked goods, cereals, candy, gelatin & puddings, dairy products.

215. 5-ETHYL-3-HYDROXY-4-METHYL-2(5H)-FURANONE - FEMA GRAS; Nature identical by FEMA; found in beef, bear, bread, wheat, cashew nuts, chicken, cocoa, coconut, coffee, crayfish, eggs, hazelnut; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, meat products.

216. 2-ETHYL-3-METHYLPYRAZINE - FEMA GRAS; found in Barley, beef, bread, coffee, egg, potato, rum, sesame seed, soybean, tea, chicken, corn, heated oil, krill, lamb/mutton, boiled shrimp, fermented soy sauce; used in Non-alcoholic beverages, ice cream, ices, candy, gelatin & puddings.

217. 4-ETHYLBENZALDEHYDE - FEMA GRAS; found in oranges, carrots, broccoli, tomatoes and other yellow and green fruits and vegetables; used in Baked goods, ice cream, ices, meat products, candy, gelatins & puddings, non-alcoholic beverages, alcoholic beverages, instant coffee/tea, confectionery/frosting, cereals, dairy products, poultry, jams

218. 4-ETHYLGUAIACOL - FDA approved food additive; FEMA GRAS; found in Coffee, cranberry, smoked pork, rum, smoked sausage, soy cake, tea, whiskey, wine; used in Non-alcoholic beverages, ice cream, ices, gelatin & puddings.

219. PARA-ETHYLPHENOL - FEMA GRAS; found in Apple cider, bilberry, cocoa, coffee, lingonberry, passion fruit, roasted peanut, rum, tomato, wine; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, margarine, meat products.

220. 3-ETHYLPYRIDINE - FEMA GRAS; found in Beef, chicken, coffee, corn oil, shrimp, soy sauce, tea, whiskey, almond, barley, beer, bread, wheat, cocoa, corn, eggs; used in Non-alcoholic beverages, ice cream, ices, meat, meat sauces, soups, candy, gelatin & puddings, baked goods, frozen dairy.

221. EUCALYPTOL - FDA approved food additive; FEMA GRAS; found in Allspice, apples, basil oil, bay leaves, black currants, blueberries, brandy, cantaloupe, cheese, cinnamon, cocoa, cranberry, cumin, ginger, grapes, grapefruit, lemon, lime, melon, mint, nutmeg, olive oil, orange, oregano, papaya, peas, pepper, peppermint, rosemary, saliva, spearmint, tangerine, thyme, babaco fruit, bilberry, corn; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.

222. FARNESOL - FDA approved food additive; FEMA GRAS; found in Oranges, lemon grass, Ambrette seeds, cananga, Ylang-Ylang, Peru balsam, palmarosa, tuberose, Ceylon citronella; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings.

223. D-FENCHONE - FDA approved food additive; FEMA GRAS; found in Anise, basil, fennel, peppermint, saffron, thyme; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, baked goods.

224. FENNEL SWEET OIL - FDA GRAS; FEMA GRAS; found in the plant *foeniculum vulgare* Thelling, fennel seeds; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, alcoholic beverages, condiments, meats.

225. FENUGREEK, EXTRACT, RESIN, AND ABSOLUTE - FDA GRAS; FEMA GRAS; found in Seed of a herb (*Trigonella foenum graecum* L.) common in mountainous and hilly areas of Europe, the Mediterranean and Asia, fenugreek; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum, syrups, pickles, meats.

226. FIG JUICE CONCENTRATE - found in Figs; Common food item.

227. FOOD STARCH MODIFIED - FDA approved food additive; widespread; used in Cured pork.

228. FURFURYL MERCAPTAN - FEMA GRAS; found in Coffee, beef, chicken, meat, popcorn; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, icings.
229. 4-(2-FURYL)-3-BUTEN-2-ONE - FEMA GRAS; found in Coffee; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, alcoholic beverages.
230. GALBANUM OIL - FDA approved food additive; FEMA GRAS; found in the plant *ferula galbaniflua* Boiss & Buhse, galbanum; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, meat products.
231. GENET ABSOLUTE - FDA approved food additive; FEMA GRAS; found in Flowers of plant *spartium junceum*, genet flowers; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum.
232. GENTIAN ROOT EXTRACT - FEMA GRAS; found in Gentian root (herbaceous plant of mountainous Europe); used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, alcoholic beverages.
233. GERANIOL - FDA GRAS; FEMA GRAS; found in Carrot, cherry, cocoa powder, grape, grapefruit juice, lemon oil, orange juice, raspberry, tea, apples, apricot, beer, bilberry, black currants, blackberries; used in Non-alcoholic beverages, ice cream, ices, baked goods, toppings, candy, gelatin & puddings, chewing gum.
234. GERANIUM ROSE OIL - FDA GRAS; FEMA GRAS; found in *Pelargonium graveolens*, a perennial plant grown in the subtropics, geranium leaves and stems; used in Non-alcoholic beverages, ice cream, ices, baked goods, jellies, candy, gelatin & puddings, chewing gum.
235. GERANYL ACETATE - FDA GRAS; FEMA GRAS; found in Celery, cocoa, grapefruit, kumquat oil, lemons, limes, oranges, peppers, tomatoes, numerous essential oils (carrot, lavender, lemongrass, coriander, saffron), black currants, chervil, gin, ginger, grape, grapefruit juice, orange juice, passion fruit, pineapple, plum; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, syrups, meat products, gravies.
236. GERANYL BUTYRATE - FDA approved food additive; FEMA GRAS; found in Celery, kumquats, lemons, lavender oil, oranges, tomatoes, passion fruit; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, meat products, gravies.

237. GERANYL FORMATE - FDA approved food additive; FEMA GRAS; found in Lemons, oranges, tea and oil of *ledum palustre* (geranium), hops, black & green tea, wine; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum.
238. GERANYL ISOVALERATE - FDA approved food additive; FEMA GRAS; found in the tree *eucalyptus citroidora* Hook; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum.
239. GERANYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; found in *Olibanum resin*, *sativa japonica*; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum, gelatins & puddings.
240. GINGER OIL AND OLEORESIN - FDA GRAS; FEMA GRAS; found in the plant *Zingiber Officinale* Roscoe, ginger; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, condiments, meats.
241. L-GLUTAMIC ACID - FDA GRAS; FEMA GRAS; Natural constituent of proteins in plants and animals; used in Non-alcoholic beverages, baked goods, meat, meat sauces, soups, milk/dairy products, condiments, pickles, cereal, desserts.
242. L-GLUTAMINE - FDA approved food additive; FEMA GRAS; Natural constituent of proteins in plants and animals; used in Baked goods, meat products, candy, nut products, seasonings & flavorings.
243. GLYCEROL - FDA GRAS; FEMA GRAS; found in Apple cider, beer, sour cherry, peach, wine, cherry; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, meat products, candy, gelatin & puddings, chewing gum, dairy products, milk products.
244. GLYCYRRHIZIN AMMONIATED - FDA GRAS; FEMA GRAS; found in Licorice (*glycyrrhiza glabra* L.); used in Non-alcoholic beverages, candy, baked goods, chewing gum, ice cream, ices.
245. GRAPE JUICE CONCENTRATE - found in Grapes; common food item.
246. GUAIAIC WOOD OIL - FDA approved food additive; FEMA GRAS; found in the tree *Bulnesia Sarmienti* Lorentz, guaiac wood; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, meat products.

247. GUAIACOL - FDA approved food additive; FEMA GRAS; found in Celery, cocoa, coffee, rum, soybean, tea, tomato, whiskey, wine; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, meat, candy, gelatin & puddings, chewing gum, dairy products.

248. GUAR GUM - FEMA GRAS; found in the seed of the guar plant (endosperms of *Cyamopsis tetragonolobus* L) which is similar to the soybean plant; used as Stabilizer/thickening agent, film foaming agent in cheese, fats/oils, breakfast cereal, dairy products, jams/jellies, gravies, processed vegetables, baked goods.

249. 2,4-HEPTADIENAL - FEMA GRAS; found in Cranberry, chicken broth, cooked chicken, green pea, country cured ham, black tea, tomato, rye crispbread, avocado, beef, black currants, bread, wheat, broccoli, butter, heated butter, cabbage, cauliflower; used in Baked goods, meat, meat sauces, soups, candy, meat products.

250. GAMMA-HEPTALACTONE - FDA approved food additive; FEMA GRAS; found in Beef fat, roasted filbert, mango, passion fruit, peach black tea, asparagus, butter, hazelnut, lamb/mutton, leek, licorice, nectarine, papaya, pineapple; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.

251. HEPTANOIC ACID - FDA approved food additive; FEMA GRAS; found in Apple, beer, white grape, roasted peanut, pork fat, Jamaican rum, sauerkraut, black tea, whiskey, sherry wine, banana, beef, dried blue cheese, brandy, bread, wheat butter, cheddar cheese; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, margarine.

252. 2-HEPTANONE - FDA approved food additive; FEMA GRAS; found in Apples, banana, beer, beef, bread, butter, cheese, cocoa, coffee, milk, peanut, papaya, mushroom, pepper, potato chip, wine, apricot, asparagus, beans, blue cheese, wheat butter; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, condiments, gravies.

253. 3-HEPTEN-2-ONE - FEMA GRAS; found in Roasted filbert, bell pepper, capsicum peppers, hazelnut, hops, muruci; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, dairy products.

254. 2-HEPTEN-4-ONE - FEMA GRAS; found in Roasted filbert; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, dairy products.

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255. 4-HEPTENAL - FDA approved food additive; FEMA GRAS; found in Butterfat, soybean oil; used in Non-alcoholic beverages, baked goods, meat, meat sauces, candy, cereal, dairy products.

256. TRANS-2-HEPTENAL - FEMA GRAS; found in Apple, bacon fat, roast beef, chicken broth, cooked chicken, cranberry, country cured ham, green pea, potato, tomato; used in Baked goods, meat, meat sauces, soups, candy.

257. HEPTYL ACETATE - FEMA GRAS; found in Apples, grapes, bananas, pears, plums, beer, rum, whiskey, wine; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum.

258. OMEGA-6-HEXADECENYL LACTONE - FDA approved food additive; FEMA GRAS; found in Ambrette seed oil, musk grain oil, ambrette seeds; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum.

259. GAMMA-HEXALACTONE - FDA approved food additive; FEMA GRAS; found in Apricot, beef, bread, butter, cocoa, nuts, peach, pineapple, strawberry, tea, tomato, apple, asparagus, beer, blackberry, brandy, wheat; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

260. HEXANAL - FDA approved food additive; FEMA GRAS; found in Apples, bacon, bananas, beans, beef, bilberries, bread, brussels sprouts, butter, cabbage, cauliflower, celery, chicken, coffee, cocoa, grapes, ham, oranges, peas, raspberries, tomatoes, apricot, artichoke, asparagus, avocado, barley, beer, blackberry, blueberry, others; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, meat, gravies, frozen dairy goods.

261. HEXANOIC ACID - FDA approved food additive; FEMA GRAS; found in Apple, apple juice, beef, beer, cheddar cheese, grape, coffee, milkfat, mushrooms, orange juice, roasted peanut, raspberry, rum, strawberry, sauerkraut, apricot, banana, barley, blackberry, blue cheese, blueberry, bread, wheat; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, condiments.

262. 2-HEXEN-1-OL - FDA approved food additive; FEMA GRAS; found in Raspberries, apples, Valencia orange juice, apricots, bananas, beer, bilberries, black currants, grapes, Swiss cheese, peaches, peas, potatoes, strawberries, tea; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings.

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263. 3-HEXEN-1-OL - FDA approved food additive; FEMA GRAS; found in Grapefruit juice, raspberry juice, several herbs, apple, banana, bean, beer, cabbage, cauliflower, celery, cognac, grape, grapefruit, orange, pea, raspberry, strawberry, tea, tomato, apricot, cantaloupe, pineapple, honeydew melon; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum.

264. CIS-3-HEXEN-1-YL ACETATE - FDA approved food additive; FEMA GRAS; found in Snap bean, bilberry, celery, grenache grape, black tea, apple, apple juice, apricot, artichoke, asparagus, avocado, banana, beans, beef, beer, blackberry, blueberry, dried bonito, grape brandy, bread, wheat; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

265. 2-HEXENAL - FDA approved food additive; FEMA GRAS; found in Apple, banana, beef roast, bilberry, cabbage, cauliflower, cooked chicken, cucumber, grape, lemon, lime, orange, pear juice, green pea, potato, raspberry, strawberry, tangerine, pear, beer, chicken, fat, grape, guava, hops, peach, pork, black & green tea; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, frozen dairy goods.

266. 3-HEXENOIC ACID - FEMA GRAS; found in Banana, pork fat, raspberry, black tea; used in Non-alcoholic beverages, ice cream, ices, dairy products, candy, gelatin & puddings, chewing gum.

267. TRANS-2-HEXENOIC ACID - FEMA GRAS; found in Apples, bananas, beer, grapes, pork, raspberries, tea, apple juice, apricot, artichoke, beans, beef, blackberry, blueberry; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, salad dressings, fats & oils, frozen desserts.

268. CIS-3-HEXENYL FORMATE - FEMA GRAS; found in Tea, cognac; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, preserves & spreads.

269. HEXYL 2-METHYLBUTYRATE - FDA approved food additive; FEMA GRAS; found in Fresh & cooked apples, strawberries, mint and apple brandy, apricot, apple brandy, grape, asian pear, plum, native spearmint; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, alcoholic beverages.

270. HEXYL ACETATE - FDA approved food additive; FEMA GRAS; found in Apples, bananas, beer, currants, grapes, oranges, peas, peaches, pears, rum, soybeans, strawberries, wine, apricot, beef, black currants, blackberry, blueberry,

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brandy, cantaloupe, capers, coffee; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum, meat products, gelatins & puddings.

271. HEXYL ALCOHOL - FDA approved food additive; FEMA GRAS; found in Apple, banana, snap bean, beef roast, beer, bilberry, white bread, cabbage, cauliflower, cooked chicken, coffee, cognac, cranberry, grape, country ham, orange, green pea, peach, pear, pineapple, potato, strawberry, soybean; used in Non-alcoholic beverages, ice cream, ices, baked goods, gelatin & puddings, dairy products.

272. HEXYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; found in Grape, spearmint oil, tea, spearmint, scotch, black & green tea; used in Non-alcoholic beverages, alcoholic beverages, baked goods, candy, gelatin & puddings, dairy products, frozen dairy goods.

273. L-HISTIDINE - FEMA GRAS; found in Milk, cheese, grains, meats, poultry, eggs, fish, vegetables, nuts, fruit, natural constituent of proteins in plants and animals; used in Baked goods, meat products, milk products, confectionery & frosting.

274. HONEY - common food item.

275. HOPS OIL - FDA GRAS; FEMA GRAS; found in Flowers of Humulus Lupulus L.; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum, condiments, gelatin pudding.

276. HYDROLYZED MILK SOLIDS - found in Milk.

277. HYDROLYZED PLANT PROTEINS - FDA GRAS; found in Plants; used in Baked goods, fats & oils, milk & dairy products, meat products, candy, baby formulas, baby soups & dinners, gravies & sauces, soups, condiments & relishes.

278. 5-HYDROXY-2,4-DECADIENOIC ACID DELTA-LACTONE - FEMA GRAS; found in Peaches, beef; used in Non-alcoholic beverages, candy, baked goods, gelatins & puddings, gravies, cheese, reconstituted vegetables, condiments & relishes, confectionery & frosting, imitation dairy, chewing gum.

279. 4-HYDROXY-2,5-DIMETHYL-3(2H)-FURANONE - FEMA GRAS; found in Beef, roasted filbert, maple syrup, pineapple, popcorn, cassia oil; used in Ice cream, ices, baked goods, candy, gelatin & puddings, frozen dairy goods.

280. 2-HYDROXY-3,5,5-TRIMETHYL-2-CYCLOHEXEN-1-ONE - FEMA GRAS; found in Burley tobacco, rose oil, gardenia; used in Non-alcoholic beverages, ice cream, ices, candy, frozen dairy goods.
281. 4-HYDROXY-3-PENTENOIC ACID LACTONE - FEMA GRAS; found in Bread, grapes, soy beans; used in Ice cream, ices, candy, baked goods, gelatins & puddings, meat, meat sauces, soups, milk & dairy products, cereals.
282. 2-HYDROXY-4-METHYLBENZALDEHYDE - FEMA GRAS; found in Blackberry, capers, cranberry, raspberry, sea buckthorn; used in Baked goods, ice cream, ices, candy, gelatins & puddings, milk products, processed fruit, confectionery & frosting, nut products.
283. 4-HYDROXYBUTANOIC ACID LACTONE - FEMA GRAS; found in Apricots, bread, butter, coffee, cocoa, nuts, grape, mushroom, onion, pineapple, popcorn, port wine, sherry, sparkling wine, tea, tomato, wine; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, dairy products, breakfast cereals, meat products.
284. HYDROXYCITRONELLAL - FDA approved food additive; FEMA GRAS; found in Beef, mushroom, nectarine, peach; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum.
285. 6-HYDROXYDIHYDROTHEASPIRANE - FEMA GRAS; found in Black tea; used in Non-alcoholic beverages, ice cream, ices, candy, gelatin & puddings.
286. 4-(PARA-HYDROXYPHENYL)-2-BUTANONE - FDA approved food additive; FEMA GRAS; found in Raspberry, almond, beef, coffee, grape, guava, hazelnut, pineapple, popcorn, raspberry, soy sauce, strawberry; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.
287. HYSSOP OIL - FDA GRAS; FEMA GRAS; found in Hyssopus officinalis L.; used in Alcoholic beverages, ice cream, candy, baked goods.
288. IMMORTELLE ABSOLUTE AND EXTRACT - FDA GRAS; FEMA GRAS; found in Helichrysum angustifolium DC; also known as Helichrysum italicum; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, frozen dairy.
289. ALPHA-IONONE - FDA approved food additive; FEMA GRAS; found in Carrot, celery, orange peel oil, raspberry, tangelo, black tea, green tea, whiskey, almond, banana, blackberry, grape brandy, raspberry brandy, capers, carrots,

celery, cherry, grapefruit juice, kumazasa, mango ginger, peach, peas, plum; used in Non-alcoholic beverages, ice cream, ices, baked goods, icings, candy, gelatin & puddings, chewing gum.

290. BETA-IONONE - FDA approved food additive; FEMA GRAS; found in Carrot, guava, milk, muskmelon, passion fruit, peas, raspberry, tea, tomato, whiskey, almonds, apricot, beer, blackberry, brandy, broccoli, capers, cherry, endive; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, maraschino cherries, candy, gelatin & puddings, chewing gum.

291. ALPHA-IRONE - FDA approved food additive; FEMA GRAS; used in Baked goods, frozen dairy, soft candy, gelatin & puddings, alcoholic beverages.

292. ISOAMYL ACETATE - FDA approved food additive; FEMA GRAS; found in Apple, banana, beer, swiss cheese, cocoa, coffee, cognac, grape, peach, pear, pineapple, rum, strawberry, tomato; whiskey, champagne wine, grape wine, apricot, blackberry, blackberry brandy, bread, wheat, butter; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

293. ISOAMYL BENZOATE - FDA approved food additive; FEMA GRAS; found in Beer, cherries, cocoa, litchi, papaya, quince; used in Baked goods, chewing gum, hard candy, soft candy, gelatin & puddings.

294. ISOAMYL BUTYRATE - FDA approved food additive; FEMA GRAS; found in Banana, blue cheese, grape, apple, grape juice, rum, tomato, watermelon, apple wine, champagne wine, apricot, apple brandy, grape brandy, guava, honey, mango; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

295. ISOAMYL CINNAMATE - FDA approved food additive; FEMA GRAS; found in Wine, cinnamon, styrax; used in Baked goods, soft candy, gelatin & puddings.

296. ISOAMYL FORMATE - FDA approved food additive; FEMA GRAS; found in Apple, beer, brandy, chicken, honey, eggs, quince, rum, strawberries, tea, vinegar, grape brandy, whiskey, wine; used in Chewing gum, baked goods, soft candy, alcoholic beverages.

297. ISOAMYL HEXANOATE - FDA approved food additive; FEMA GRAS; found in Apple, apricot, banana, brandy, grapes, grapefruit juice, plums, strawberries, beer, grape brandy, plum brandy, rum, sherry; used in Hard candy, alcoholic beverages, frozen dairy, soft candy, chewing gum.

298. ISOAMYL ISOVALERATE - FDA approved food additive; FEMA GRAS; found in Banana, wine, olive oil, tomato, watermelon, champagne wine, beer, grape brandy, plum, sherry, spearmint, scotch, whiskey; used in Non-alcoholic beverages, ice cream, ices, jellies, candy, gelatin & puddings, chewing gum, frozen dairy goods.

299. ISOAMYL OCTANOATE - FDA approved food additive; FEMA GRAS; used in Baked goods, soft candy, gelatin & puddings, alcoholic beverages.

300. ISOAMYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; found in Peppermint oil; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, toppings.

301. ISOBORNYL ACETATE - FDA approved food additive; FEMA GRAS; found in Kiwi fruit, brandy, malt whiskey, whiskey; used in Baked goods, frozen dairy, soft candy, gelatin & puddings.

302. ISOBUTYL ACETATE - FDA approved food additive; FEMA GRAS; found in Apples, bananas, cantaloupe, cocoa, figs, honeydew melon, nectarines, pears, soy sauce, port wine, olives, beer, grape, guava, mango, melon; used in Baked goods, chewing gum, gelatin & puddings, hard candy.

303. ISOBUTYL ALCOHOL - FDA approved food additive; FEMA GRAS; found in Beef, blackberry, wheat bread, cheddar cheese, cherries, cocoa, coffee, leeks, pineapple, potato, tea, apple, apricot, banana, barley, brandy; used in Gelatin & puddings, soft candy, baked goods, frozen dairy.

304. ISOBUTYL CINNAMATE - FDA approved food additive; FEMA GRAS; found in Cider, wine, coffee, sour cherry, guava, pineapple, cognac, raspberry, strawberry, tomato, beer, mullein leaves; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

305. ISOBUTYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; found in Cocoa; used in Non-alcoholic beverages, ice cream, ices, baked goods, maraschino cherries, candy, gelatin & puddings, chewing gum.

306. ISOBUTYL SALICYLATE - FDA approved food additive; FEMA GRAS; found in Feijoa fruit; used in Soft candy, baked goods, gelatin & puddings.

307. 2-ISOBUTYL-3-METHOXYPIRAZINE - FEMA GRAS; found in Bean, beet, coffee, lettuce, parsnip, pea, pepper, potato, spinach, grape; used in

Non-alcoholic beverages, cereals, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum, dairy products, meats, meat sauces, soups.

308. ALPHA-ISOBUTYLPHENETHYL ALCOHOL - FDA approved food additive; FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.

309. ISOBUTYRALDEHYDE - FDA approved food additive; FEMA GRAS; found in Apple, cauliflower, carrots, coffee, corn, eggs, lentils, lettuce, mushrooms, pork, potato, banana, barley, beans, beef, beer, blue cheese, brandy, bread, wheat, butter; used in Baked goods, soft candy, gelatin & puddings, frozen dairy.

310. ISOBUTYRIC ACID - FDA approved food additive; FEMA GRAS; found in Apple, beef, beer, celery, cheese, cognac, roasted peanut, raspberry, Jamaican rum, sauerkraut, strawberry, vinegar, whiskey, sherry wine, banana, blue cheese, grape brandy, bread, wheat, butter, cashew, cheddar cheese; used in Candy, dairy products, baked goods.

311. D,L-ISOLEUCINE - FEMA GRAS; used in Milk products, meat products, condiment relish, soups.

312. ALPHA-ISOMETHYLIONONE - FDA approved food additive; FEMA GRAS; used in Baked goods, soft candy, gelatin & puddings, chewing gum.

313. METHOPRENE - EPA approved pesticide for use on tobacco; found in Similar to naturally occurring biochemicals, insects, tolerances permitted in drinking water and some processed foods; used in Walnuts, wheat, pecans, meat fat, meat, eggs, milk, prunes/raisins, peanut hulls, coffee beans, cocoa bean, mushrooms, peanuts, poultry, drinking water, processed foods.

314. 2-ISOPROPYLPHENOL - FEMA GRAS; found in Japanese whiskey; used in Meat, soups, condiments.

315. ISOVALERIC ACID - FDA approved food additive; FEMA GRAS; found in Peppermint oil, spearmint oil, tobacco, apple, beer, bread, cheese, coffee, grape, orange, pea, peanut, peach, raspberry, soy sauce, tomato, whiskey, banana, blue cheese, grape brandy, wheat, heated butter, capers, cashew, cheddar cheese; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, cheese, frozen dairy goods.

316. JASMINE ABSOLUTE, CONCRETE & OIL - FDA GRAS; FEMA GRAS; found in Jasmine flowers; used in Baked goods, frozen dairy, soft candy, alcoholic beverages, chewing gum.

317. KOLA NUT EXTRACT - FDA GRAS; FEMA GRAS; found in Soudan coffee, bissu nut, guru nut, kola nut tree, kola nut; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatin pudding.

318. LABDANUM ABSOLUTE AND OLEORESIN - FDA approved food additive; FEMA GRAS; found in *Cistus ladaniferus* L.; used in Baked goods, frozen dairy, soft candy, gelatin & puddings.

319. LACTIC ACID - FDA GRAS; FEMA GRAS; found in Apple juice, beef, beer, bread, cocoa, coffee, honey, orange juice, peas, tomato juice, vinegar, wine, brandy, wheat, sour cherry, cherry, grape, guava, mango, milk, papaya, dry salami, sherry, tomato; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, toppings, candy, gelatin & puddings, chewing gum, pickles & olives, cheese.

320. LAURIC ACID - FDA GRAS; FEMA GRAS; found in Apple, cheddar cheese, beef fat, beer, butter oil, blue cheese, roasted cocoa bean, coconut meat, cognac, grape, country cured ham, milk butterfat, roasted peanut, pork fat, black tea, whiskey, banana, beef, blackberry, brandy, bread, wheat, butter, heated butter, cantaloupe, cashew nuts; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

321. LAURIC ALDEHYDE - FDA approved food additive; FEMA GRAS; found in Apples, beef, beer, wheat bread, carrots, celery, cheddar cheese, fish, ham, peanuts, tomato, blackberry, bread, wheat, heated butter, cabbage, caviar, chicken; used in Chewing gum, baked goods, hard candy, gelatin & puddings.

322. LAVANDIN OIL - FDA GRAS; FEMA GRAS; found in Flowering stalks of the lavender plant; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.

323. LAVENDER OIL - FDA GRAS; FEMA GRAS; found in Lavender flowers; used in Baked goods, frozen dairy, soft candy, gelatin & puddings.

324. LEMON OIL AND EXTRACT - FDA GRAS; FEMA GRAS; found in Lemons; used in Soft candy, baked goods, breakfast cereals, frozen dairy, condiment relish, gelatin & puddings, chewing gum.

325. LEMONGRASS OIL - FDA GRAS; FEMA GRAS; found in Lemongrass; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.
326. L-LEUCINE - FDA approved food additive; FEMA GRAS; found in Protein, plants and animals; essential amino acid; used in Baked goods, breakfast cereals, milk products, meat products, soups.
327. LEVULINIC ACID - FDA approved food additive; FEMA GRAS; found in Beer, bread, lettuce, hydrolyzed soy protein, wheat, papaya; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, meat products, reconstituted vegetables.
328. LICORICE ROOT, FLUID EXTRACT AND POWDER - FDA GRAS; FEMA GRAS; found in Glycyrrhizia glabra; used in Non-alcoholic beverages, ice cream, ices, baked goods, syrups, candy, gelatin & puddings, chewing gum, meat products.
329. LIME OIL - FDA GRAS; FEMA GRAS; found in Lime; used in Chewing gum, hard candy, frozen dairy, soft candy, gelatin & puddings.
330. LINALOOL OXIDE - FDA approved food additive; FEMA GRAS; found in Apricot, cocoa, coffee, fruit, hops, orange juice, tea, wine, tomato, oranges; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, dairy products.
331. LINALYL ACETATE - FDA GRAS; FEMA GRAS; found in Lemon essential oil, cocoa, celery, honey, mint, lemon oil, orange juice, peach, pepper, sage, tomato, thyme, bergamot, clary sage, lavender; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, condiment relish, candy, gelatin & puddings, chewing gum, dairy products.
332. LINDEN FLOWERS - FDA GRAS; FEMA GRAS; found in Linden flowers; used in Non-alcoholic beverages.
333. LOVAGE OIL AND EXTRACT - FDA approved food additive; FEMA GRAS; found in Lovage plant, levisticum; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, icings, sweet sauce, alcoholic beverages.
334. L-LYSINE - Found in Amino acid, plant and animal proteins; used in Meat products, breakfast cereals.
335. MACE POWDER AND OIL - FDA GRAS; FEMA GRAS; found in

Mace; used in Alcoholic beverages, soft candy, frozen dairy, condiments.

336. MAGNESIUM CARBONATE - Used in Baked goods, frozen dairy, flour.

337. MALIC ACID - FDA GRAS; FEMA GRAS; found in Black currents, brandy, celery, cherries, cocoa, mango, orange juice, peaches, tea, wine, grape brandy, sour cherry, gin, grapefruit juice, honey, hops, kiwi fruit, mango, mushroom; used in Baked goods, frozen dairy, soft candy, non-alcoholic beverages.

338. MALT AND MALT EXTRACT - FDA GRAS; found in *Hordeum vulgare* L and other grains, barley; used in Frozen dairy, baked goods, alcoholic beverages, beer.

339. MALTODEXTRIN - FDA GRAS; used in Baked goods, frozen dairy.

340. MALTOL - FDA approved food additive; FEMA GRAS; found in Roasted barley, white bread, butterfat, cocoa, coffee, roasted filbert, milk hydrolyzed soy protein, barley, beef, bread, wheat, butter, hazelnut, licorice, malt, milk, peanut; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, jellies, candy, gelatin & puddings, chewing gum, fats & oils, frozen dairy goods.

341. MALTYL ISOBUTYRATE - FEMA GRAS; used in Baked goods, soft candy, gelatin & puddings, jam and jelly.

342. MANDARIN OIL - FDA GRAS; FEMA GRAS; found in Tangerines, mandarin oranges; used in Soft candy, baked goods, frozen dairy, gelatin & puddings, hard candy.

343. MAPLE SYRUP AND CONCENTRATE - FDA approved food additive; Common food item; used in Baked goods, condiments, soft candy, hard candy.

344. MATE LEAF, ABSOLUTE, AND OIL - FDA GRAS; found in Mate leaves taken from the tree *Ilex paraguariensis* St. Hill; used in High levels consumed as hot, tealike beverage, flour.

345. PARA-MENTHA-8-THIOL-3-ONE - FEMA GRAS; used in Frozen dairy, soft candy, gelatin & puddings, baked goods.

346. MENTHOL - FDA approved food additive; FEMA GRAS; found in

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Raspberry, cocoa powder, peppermint plant, honey, mint, rum, cocoa, eggs, guava, raspberry, rice, spearmint; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, mouthwash.

347. MENTHONE - FDA approved food additive; FEMA GRAS; found in Celery, calms, cocoa, peppermint, raspberries, rice, spearmint; used in Baked goods, soft candy, gelatin & puddings, chewing gum.

348. MENTHYL ACETATE - FEMA GRAS; found in Peppermint oil, cornmint oil, orange juice, raspberries; used in Baked goods, frozen dairy, soft candy, gelatin & pudding.

349. DL-METHIONINE - FDA approved food additive; FEMA GRAS; found in; used in Breakfast cereals, meat products, condiment relish, soups.

350. 2-METHOXY-4-METHYLPHENOL - FDA approved food additive; FEMA GRAS; found in Anise, cocoa, pork, rum, sausage, whiskey, essential oil of Jasmine, banana, beer, coffee, cured ham, malt, sherry; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, baked goods, meat products.

351. 2-METHOXY-4-VINYLPHENOL - FDA approved food additive; FEMA GRAS; found in apple juice, bean, coffee, roasted peanut, popcorn, pork, rum, roasted sesame seed, fried soybean, tomato, wine; used in Non-alcoholic beverages, ice cream, ices, baked goods, meat, candy, gelatins & puddings, gravies.

352. PARA-METHOXYBENZALDEHYDE - FDA approved food additive; FEMA GRAS; found in Beer, cranberry juice, tea, tomato, coffee, Krill; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, miscellaneous, candy, gelatin & puddings, chewing gum, dairy products.

353. 1-(PARA-METHOXYPHENYL)-1-PENTEN-3-ONE - FDA approved food additive; FEMA GRAS; found in Jasmine, ylang ylang, tobacco; used in Soft candy, sweet sauce, non-alcoholic beverages, baked goods.

354. 4-(PARA-METHOXYPHENYL)-2-BUTANONE - FDA approved food additive; FEMA GRAS; found in Banana, coffee, ham, malt, rum, cherry, whiskey, apricot, beer, brandy, grapes, cantaloupe, cranberry, honey, melon, peppermint, plum, raspberry, salami; used in Hard candy, soft candy, baked goods, gelatin & puddings.

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355. 1-(PARA-METHOXYPHENYL)-2-PROPANONE - FDA approved food additive; FEMA GRAS; found in Chervil, issicium verum; used in Baked goods, frozen dairy, soft candy, gelatin & puddings.

356. METHOXYPYRAZINE - FEMA GRAS; found in Beef, cocoa, krill; used in Meat products, soups, gravies, baked goods.

357. METHYL 2-FUROATE - FEMA GRAS; found in Almond, cocoa, coffee, filbert, peanut, wine; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

358. METHYL 2-OCTYNOATE - FDA approved food additive; FEMA GRAS; used in Baked goods, frozen dairy, gelatin & puddings.

359. METHYL 2-PYRROLYL KETONE - FEMA GRAS; found in Roasted almond, apple juice, roast beef, white bread, cocoa, coffee, roasted filbert, dried mushroom, roasted onion, roasted peanut, popcorn, potato chip, tea; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, meat products.

360. METHYL ANISATE - FDA approved food additive; FEMA GRAS; found in Reported to occur in nature; used in Non-alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings.

361. METHYL ANTHRANILATE - FDA GRAS; FEMA GRAS; found in Cocoa, grape, lemon oil, orange oil, tea, wine, coffee, strawberry; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings.

362. METHYL BENZOATE - FDA approved food additive; FEMA GRAS; found in Banana, bilberry, cherry, cheese, cinnamon, coffee, cranberry juice, black currant, guava, honey, lingonberry juice, pea, strawberry, tea, vinegar, yogurt, brandy, butter, cashew, apple; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

363. METHYL CINNAMATE - FDA approved food additive; FEMA GRAS; found in Cinnamon, guava, basil oil, strawberry, cranberry, pineapple, plum; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, soft candy, hard candy, gelatin & puddings, chewing gum.

364. METHYL DIHYDROJASMONATE - FEMA GRAS; found in *Jasminum grandiflorum* L.; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, condiments.

365. METHYL ESTER OF ROSIN, PARTIALLY HYDROGENATED - FDA approved food additive; No natural occurrence; used in Baked goods, candy.

366. METHYL ISOVALERATE - FDA approved food additive; FEMA GRAS; found in Apple, apple juice, grape, orange, peach, pineapple, watermelon, banana, blackberry, parmesan cheese, coffee, honey, nectarine, olives, peas, strawberries; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

367. METHYL LINOLEATE (48%) METHYL LINOLENATE (52%) MI; FEMA GRAS; found in Banana, corn oil, muskmelon, peanut oil, pecan oil, safflower oil, sunflower oil, soybean oil, Yugoslavia plum brandy, almond oil, walnut kernel oil, grape, grapefruit juice, melon, strawberries; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, preserves.

368. METHYL NAPHTHYL KETONE - FDA approved food additive; FEMA GRAS; found in Beef (heated); used in Chewing gum.

369. METHYL NICOTINATE - FEMA GRAS; found in Coffee, nuts, guanabana, strawberry, vanilla bean, beef, beer, guava, hazelnuts, peanut, plum; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.

370. METHYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; found in Cocoa powder, coffee, honey, cocoa; used in Non-alcoholic beverages, ice cream, ices, baked goods, syrups, candy, gelatin & puddings, chewing gum.

371. METHYL SALICYLATE - FDA approved food additive; FEMA GRAS; found in Clove, coffee, cranberry, black currants, passion fruit, bell pepper, rum, spearmint oil, tea, tomato, wine, wintergreen leaves, blackberry, broccoli, butter, cherry cake, coffee; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, syrups.

372. METHYL SULFIDE - FDA approved food additive; FEMA GRAS; found in Asparagus, bean, cooked beef, beer, white bread, brussel sprout, butter, cabbage, carrot, cauliflower, celery, cheese, chicken, cocoa, coffee, cream, fish, garlic, lettuce, nuts, mushroom, onion, parsley, potato, rum, strawberry, tea,

tomato, wine, beef, broccoli; used in Non-alcoholic beverages, ice cream, ices, baked goods, syrups, candy, gelatin & puddings, meat products.

373. 3-METHYL-1-CYCLOPENTADECANONE - FEMA GRAS; used in Baked goods.

374. 4-METHYL-1-PHENYL-2-PENTANONE - FDA approved food additive; FEMA GRAS; used in Gelatin pudding.

375. 5-METHYL-2-PHENYL-2-HEXENAL - FEMA GRAS; found in Cocoa, "hazelnut roasted", malt, "peanut roasted", "pork cooked", potato chips, "sesame seed roasted", "tea black & green"; used in Soft candy.

376. 5-METHYL-2-THIOPHENECARBOXALDEHYDE - FEMA GRAS; found in Coffee, roasted peanut, popcorn, cooked beef; used in Non-alcoholic beverages, ice cream, ices, baked goods, meats, meat sauces, soups, candy, gelatin & puddings, chewing gum, dairy products, condiments.

377. 6-METHYL-3,5-HEPTADIEN-2-ONE - FDA approved food additive; FEMA GRAS; found in Almonds, asparagus, beef, beer, bread, wheat, cashew nuts, chicken, roasted filbert, tea, thyme, tomato; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, dairy products, snack foods.

378. 2-METHYL-3-(P-ISOPROPYLPHENYL) PROPIONALDEHYDE - FDA approved food additive; FEMA GRAS; found in Almond, beans, beef, beer bread, wheat chicken, cocoa, coffee, guava, macadamia nut, blackberry, carambola (starfruit); used in Gelatin pudding.

379. 5-METHYL-3-HEXEN-2-ONE - FEMA GRAS; found in Roasted filbert; used in Non-alcoholic beverages, ice cream, ices, baked goods, cereals, candy, gelatin & puddings, dairy products.

380. 1-METHYL-3-METHOXY-4-ISOPROPYLBENZENE - FEMA GRAS; found in Marjoram, tangerine peel, thyme; used in Non-alcoholic beverages, baked goods, meat, candy, condiments.

381. 4-METHYL-3-PENTENE-2-ONE - FEMA GRAS; found in Rye bread, coffee, tea, peanut; used in Non-alcoholic beverages, baked goods, candy, gelatin & puddings, dairy products.

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382. 2-METHYL-4-PHENYLBUTYRALDEHYDE - FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, ice cream, ices, candy, gelatin & puddings.
383. 6-METHYL-5-HEPTEN-2-ONE - FDA approved food additive; FEMA GRAS; found in Canned beef, cocoa, coffee, cranberry juice, guava, mango, olive oil, orange juice, passion fruit, potato, rum, tea, tomato, wine; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, gravies.
384. 4-METHYL-5-THIOZOLEETHANOL - FEMA GRAS; found in Cocoa, malt, peanuts roasted; used in Meat products.
385. 4-METHYL-5-VINYLTIAZOLE - FEMA GRAS; found in Cocoa aroma, yellow passion fruit aroma, cocoa, nuts, passion fruit; used in Ice cream, ices, baked goods, meat sauce, candy, chewing gum.
386. METHYL-ALPHA-IONONE - FDA approved food additive; FEMA GRAS; used in Baked goods.
387. METHYL-TRANS-2-BUTENOIC ACID - FEMA GRAS; found in Celery oil, orange juice crystals, coffee, soya bean, strawberry, aniseed; used in Non-alcoholic beverages, ice cream, ices, baked goods, meat products, soups, confection frosting.
388. 4-METHYLACETOPHENONE - FDA approved food additive; FEMA GRAS; found in Cocoa powder, black currant, hop oil; used in Non-alcoholic beverages, alcoholic beverages ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.
389. PARA-METHYLANISOLE - FDA approved food additive; FEMA GRAS; found in Carambola (starfruit), "cheese artisanal varieties", tomato, "truffles black canned"; used in Baked goods.
390. ALPHA-METHYLBENZYL ACETATE - FDA approved food additive; FEMA GRAS; found in Gardenia flower oil; used in Chewing gum.
391. ALPHA-METHYLBENZYL ALCOHOL - FEMA GRAS; found in Mushroom, Virginia tobacco, hops, grapes, endive, cranberry, Burley tobacco; used in Baked goods.

392. 2-METHYLBUTYRALDEHYDE - FDA approved food additive; FEMA GRAS; found in Beef, apple, cheddar cheese, coffee, cranberry, eggs, fish, lettuce, olive, onion, peas, tomato; used in Gelatin pudding.

393. 3-METHYLBUTYRALDEHYDE - FDA approved food additive; FEMA GRAS; found in Apple, avocado, banana, "barley roasted", beans, "beef cooked", "beef uncooked", beer, "beetroot cooked", beli, black currants, blackberry, blue cheese, "bonito dried", "brandy grape", "bread wheat", Burley tobacco, butter, "butter heated", cabbage, "cake white baked", capsicum peppers, carambola (starfruit), carrots, cashew apple, caviar, celery, cheddar cheese, "chicken cooked", "chicken fat roasted", "chicken meat roasted", "chicken roasted", "chicken skin roasted", clam steamed, cocoa, "coffee roasted", "corn oil heated", "crab blue heated", "crayfish boiled", crispbread, custard apple (Bullock's heart), elderberry juice, fish, ginger, grape, "ham cured", "ham dry cured", "hazelnut roasted", honey, hops, krill, kumazasa, "lamb/mutton cooked", "leek heated", lettuce, "macademia nut roasted", malt, "mate green", "mate roasted", mentha arvensis oil, milk, "milk pasteurized", mushroom, "mushroom (M. oreades) dried", "oat flakes toasted", oat groats, olive, oriental tobacco, paprika, peach, "peanut roasted", peas, peppermint, plum, popcorn, "pork cooked", potato, potato chips, pumpkin, quince, "radish fermented", raspberry, red currants, "rice cooked", rum, "rye sourdough crumb", sake, sapodilla fruit, soursop, "soy sauce fermented", "spearmint native", "spearmint scotch", Swiss cheese, "tea black & green", tomato, tomato paste, "tomato fresh", "trout boiled", "truffles black fresh", "truffles black canned", vinegar, Virginia tobacco, whiskey, wine; used in Baked goods.

394. 2-METHYLBUTYRIC ACID - FDA approved food additive; FEMA GRAS; found in Coffee, cocoa powder, cranberry juice, Jamaican rum, strawberry, black tea, tomato, whiskey; used in Non-alcoholic beverages, ice cream, ices, candy.

395. ALPHA-METHYLCINNAMALDEHYDE - FDA approved food additive; FEMA GRAS; found in Peppermint oil; used in Hard candy.

396. METHYLCYCLOPENTENOLONE - FDA approved food additive; FEMA GRAS; found in Cocoa, coffee, roasted filbert, roasted onion, powdered orange; used in Non-alcoholic beverages, ice cream, ices, baked goods, syrups, candy, gelatin & puddings, chewing gum.

397. 2-METHYLHEPTANOIC ACID - FDA approved food additive; FEMA GRAS; found in Mutton, black tea; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.

398. 2-METHYLHEXANOIC ACID - FEMA GRAS; found in Virginia tobacco, mutton; used in Baked goods, candy, gelatin & puddings.
399. 3-METHYLPENTANOIC ACID - FEMA GRAS; found in Cheese, tobacco leaf oil; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.
400. 4-METHYLPENTANOIC ACID - FEMA GRAS; found in Apple, beef, Oriental tobacco, grapes, cocoa, strawberry, tomato, Virginia tobacco; used in Condiment relish.
401. 2-METHYLPYRAZINE - FEMA GRAS; found in Roasted almond, roast beef, white bread, cocoa, coffee, roasted filbert, dried mushroom, roasted peanut, popcorn, potato chip, rum, sesame seed, soy products, tomato, whiskey; used in Non-alcoholic beverages, ice cream, ices, baked goods, meat, meat sauces, candy, gelatin & puddings, cereals, dairy products.
402. 5-METHYLQUINOXALINE - FEMA GRAS; found in Almonds roasted, coffee roasted; used in Frozen dairy.
403. 2-METHYLTETRAHYDROFURAN-3-ONE - FEMA GRAS; found in Almond roasted, beans, "beef cooked", beer, "bonito dried", "bread wheat", cherimoya, "chicken cooked", cocoa, "coffee roasted", crispbread, guava, "hazelnut roasted", licorice, "macadamia nut roasted", malt, "mate green", "mate roasted", mushroom, "onion roasted", Oriental tobacco, paprika, passion fruit, "peanut roasted", pineapple, "pork cooked", potato chips, "potato baked", "potato sweet cooked", pumpkin, rum, "soy sauce fermented", tomato, Virginia tobacco; used in Gravies.
404. (METHYLTHIO)METHYLPYRAZINE (MIXTURE OF ISOMER; FEMA GRAS; used in Baked goods, candy.
405. 3-METHYLTHIOPROPIONALDEHYDE - FEMA GRAS; found in Bean, beef broth, bread, cheese, cocoa bean, roasted nuts, milk, potato chip, soy sauce, tomato, roasted turkey; used in Ice cream, ices, baked goods, dairy products, fats/oils.
406. METHYL 3-METHYLTHIOPROPIONATE - FDA approved food additive; FEMA GRAS; found in cantaloupe, pineapple; used in Soft candy.
407. 2-METHYLVALERIC ACID - FDA approved food additive; FEMA GRAS; found in Cherimoya, guava, mango, Oriental tobacco, "potato baked", rum, Virginia tobacco; used in Frozen dairy.

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408. MIMOSA ABSOLUTE AND EXTRACT - FDA approved food additive; FEMA GRAS; found in Mimosa flowers; used in Frozen dairy products.
409. MOLASSES EXTRACT AND TINCTURE - FDA GRAS; found in Refined sugars; Common food item.
410. MOUNTAIN MAPLE SOLID EXTRACT - FDA approved food additive; FEMA GRAS; found in Mountain maple tree sap; used in Baked goods.
411. MULLEIN FLOWERS - FDA approved food additive; found in Mullein flowers; used in FDA direct, natural flavor.
412. MYRISTALDEHYDE - FDA approved food additive; FEMA GRAS; found in Apricot, cucumber; used in Frozen dairy.
413. MYRISTIC ACID - FDA approved food additive; FEMA GRAS; found in Apple, banana, beef, beer, blackberry, brandy grape, butter, cantaloupe, cashew nuts, cheese (blue, cheddar, roquefort), cognac, country ham, heated milk, roasted peanut, pork fat, potato; used in Non-alcoholic beverages, baked goods, cheese, candy, gelatin & puddings, gravies.
414. MYRRH OIL - FDA approved food additive; FEMA GRAS; found in Myrrh; used in Alcoholic beverages.
415. BETA-NAPHTHYL ETHYL ETHER - FEMA GRAS; used in Soft candy.
416. NEROL - FDA approved food additive; FEMA GRAS; found in Apricot, arctic bramble, beer, blackberry, blueberry, "brandy grape", "brandy plum", cherimoya, chervil, cranberry, curuba fruit, elderberry, gin, grape, grapefruit juice, "guava pineapple", honey, hops, litchi, lulo fruit (*solanum vestissimum* D.), mango, "mate green", "mate roasted", orange juice, papaya, passion fruit, peach, plum, potato, raspberry, soursop, tamarind, tapereba, "tea black & green", tomato, tomato paste, wine; used in Frozen dairy products.
417. NEROLI BIGARDE OIL - FDA GRAS; FEMA GRAS; found in Oranges, blossoms of *C. aurantium* L.; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.
418. NEROLIDOL - FDA approved food additive; FEMA GRAS; found in Cardamom, grapefruit, hops, lime, grapefruit oil; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

419. NONA-2-TRANS,6-CIS-DIENAL - FEMA GRAS; found in Apple, banana, beef, beer, blue cheese, cheddar cheese, brandy plum, "bonito dried", "bread wheat", capers, capsicum peppers, cherry, "cherry sour", "cherry sweet", "chicken fat roasted", "chicken meat roasted", "chicken roasted", "chicken skin roasted", "clam steamed", cowberry (lingonberry), "crayfish boiled", cucumber, endive, guava, mango, "mate green", "mate roasted", melon, mentha arvensis oil, milk, muskmelon (cucumis melo L.), peas, "salmon raw spawning)", "tea black & green", trassi cooked, "trout boiled", watermelon (citrullus vulgaris); used in Frozen dairy goods.

420. 2,6-NONADIEN-1-OL - FDA approved food additive; FEMA GRAS; found in Cucumber, frozen pea, heated pork fat, potato chip, whole soybean, tomato; used in Non-alcoholic beverages, alcoholic beverages, baked goods, candy, gelatin & puddings, gravies.

421. GAMMA-NONALACTONE - FDA approved food additive; FEMA GRAS; found in Barley, beef, beer, wheat bread, butter, capers, cherry, chicken, clam, cocoa, nuts, peach, pineapple, pork, rum, soybean, tea, tomato, whiskey; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

422. NONANAL - FDA approved food additive; FEMA GRAS; found in Apple, apple flowers, apricot, arctic bramble, "artichoke cooked", asparagus, avocado, banana, "beef cooked", "beef heated (in water)", "beef uncooked", beer, beli, bilberry, bittermelon vine, black currants, blackberry, "bonito dried", "brandy grape", "bread wheat", butter, "butter heated", cabbage, "cake white baked", cantaloupe, carambola (starfruit), carrots, cashew apple, cauliflower, "cauliflower cooked", caviar, celery, cherry, "cherry sour", "chicken cooked", "chicken fat roasted", chicken heated (in water), "chicken meat roasted", "chicken roasted", "chicken skin roasted", chive, "clam steamed", cocoa, coconut, corn (maize), "corn oil heated", cowberry (lingonberry), cranberry, "crayfish boiled", cream, crispbread, cucumber, "duck fat boiled", "duck meat boiled", egg, "egg white cooked", "egg whole cooked", "egg yolk cooked", elderberry juice, endive, faham leaves, fish, gin, ginger, grape, grapefruit juice, "guava pineapple", "ham dry cured", "hazelnut roasted", honey, honeydew melon (cucumis inodorus Nand.), hops, krill, kumazasa, "lamb/mutton cooked", litchi, loganberry, loquat, "macadamia nut roasted", mango, mangosteen, "mate green", mate roasted, melon, milk, "milk pasteurized", "mushroom (M. oreades) dried", muskmelon (cucumis melo L.), oat groats, "oats roasted oil", olive, orange juice, Oriental tobacco, papaya, peach, "peanut oil heated", "peanut roasted", peas, pepino, "pistacia fruit", plum mirabelle, "pork cooked", potato chips, "potato baked", "potato sweet baked (Ipomoea batatas (L.)

Lam.)", "potato sweet cooked", red currants, "rice cooked", rum, "rye sourdough crumb", "salami dry", "salmon raw spawning", sesame seed roasted, "spearmint scotch", strawberry, tapereba, "tea black & green", tomato, tomato paste, "tomato fresh", watermelon (*citrullus vulgaris*), whiskey, wine; used in Baked goods.

423. NONANOIC ACID - FDA approved food additive; FEMA GRAS; found in Apple, apricot, artichoke, avocado, banana, beef, beer, wheat bread, lemon, lime, orange, Jamaican rum, black tea, sherry wine, pork fat; used in Non-alcoholic beverages, alcoholic beverages, baked goods, meat products, candy, gelatin & puddings, dairy products.

424. 2-NONANONE - FDA approved food additive; FEMA GRAS; found in Strawberry; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, dairy products, condiments.

425. TRANS-2-NONEN-1-OL - FEMA GRAS; found in Asparagus, "brandy grape", "cheese artisanal varieties", cucumber, melon, muskmelon (*cucumis melo* L.), nectarine, plum, prickly pear, wine; used in Baked goods.

426. 2-NONENAL - FEMA GRAS; found in Asparagus, carrot, cherry, cucumber, egg, endive, olives, peach, peas, tomato, watermelon; used in Meat products.

427. NONYL ACETATE - FDA approved food additive; FEMA GRAS; found in Apple, beer, cantaloupe, grape, grapefruit juice, honeydew melon (*cucumis inodorus* Nand.), milk, pepino; used in Frozen dairy products.

428. NUTMEG POWDER AND OIL - FDA GRAS; FEMA GRAS; found in Nutmeg; used in Gelatin pudding, meat products, condiments, baked goods.

429. OAK CHIPS EXTRACT AND OIL - FDA approved food additive; FEMA GRAS; found in Oak tree wood chips; used in Baked goods.

430. OAK MOSS ABSOLUTE - FDA approved food additive; FEMA GRAS; found in Essential oil of lichen, oak moss; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, dairy products, meat products.

431. 9,12-OCTADECANOIC ACID (48%) AND 9,12,15-OCTADE; FDA GRAS; FEMA GRAS; found in Potato, tomato, pork fat, apple, beer, cheese, country ham; used in Non-alcoholic beverages, alcoholic beverages, preserves, spreads, candy, gelatin & puddings.

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432. DELTA-OCTALACTONE - FEMA GRAS; found in Apricot, beef, blackberry, butter, cheese (blue, cheddar, parmesan), cranberry, cream, coconut, nuts, milk, pineapple, rum, strawberry; used in Non-alcoholic beverages, ice cream, ices, baked goods, margarine, candy, gelatin & puddings.

433. GAMMA-OCTALACTONE - FDA approved food additive; FEMA GRAS; found in Apricot, asparagus, beef, beer, blackberry, blue cheese, brandy grape, roasted burley, beef fat, butter, cantaloupe, cherry, chicken, cranberry, roasted filbert, grape, mango, peach, roasted peanut, pineapple, strawberry, tea, tomato; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, syrups.

434. OCTANAL - FDA approved food additive; FEMA GRAS; found in Apple, apricot, "artichoke cooked", avocado, "beef cooked", "beef heated (in water)", "beef uncooked", beer, bilberry, black currants, blackberry, "bonito dried", "brandy grape", "brandy plum", "bread wheat", butter, "butter heated", cabbage, "cake white baked", carambola (starfruit), carrots, cauliflower, "cauliflower cooked", caviar, celery, cheddar cheese, cherry, "cherry sour", "chicken cooked", "chicken fat roasted", "chicken heated (in water)", "chicken meat roasted", "chicken roasted", "chicken skin roasted", "clam steamed", cocoa, coconut, "corn oil heated", cowberry (lingonberry), "crab blue heated", cranberry, "crayfish boiled", cream, "duck fat boiled", "duck meat boiled", egg, "egg yolk cooked", fish, grape, grapefruit juice, "ham dry cured", "hazelnut roasted", honey, hops, jackfruit, krill, kumazasa, "lamb/mutton cooked", litchi, loquat, macadamia nut roasted, mango, "mate green", "mate roasted", milk, "milk pasteurized", mushroom, "mushroom (M. oreades) dried", muskmelon (cucumis melo L.), "oat flakes toasted", oat groats, "oats roasted oil", olive, orange juice, papaya, peaches, "peanut oil heated", "peanut roasted", peas, "pecan roasted", "plum mirabelle", "pork cooked", potato, potato chips, "potato sweet cooked", red currants, "rice cooked", rum, "salami dry", "salmon raw spawning", sesame seed roasted, "spearmint scotch", "tea black & green", tomato, "trassi cooked", "trout boiled", watermelon (citrullus vulgaris), wine; used in Frozen dairy products.

435. OCTANOIC ACID - FDA GRAS; FEMA GRAS; found in Apple, beer, bread, blue cheese, cheddar cheese, romano & roquefort cheese, cognac, grapefruit, country ham, lime oil, heated milk, orange juice, potato crisp, raspberry, rum, sauerkraut, sherry, strawberry, whiskey; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, condiments.

436. 1-OCTANOL - FDA approved food additive; FEMA GRAS; found in Apple, apricot, blackberry, blueberry, cantaloupe, celery, cherry, coconut, fish,

grape, kiwi, mushroom, pear, peas, strawberry, Virginia tobacco; used in Chewing gum.

437. 2-OCTANONE - FDA approved food additive; FEMA GRAS; found in Apple, banana, beef, cheese, coffee, cocoa, hop oil, milk, olive oil, peanut, soybean, potato chip, tea, wine; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, dairy products.

438. 3-OCTEN-2-ONE - FEMA GRAS; found in Roasted filbert, mushroom, dried pea, tea; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, dairy products.

439. 1-OCTEN-3-OL - FDA approved food additive; FEMA GRAS; found in Banana, snap bean, beef fat, beer, cocoa, coffee, cranberry, cream, black currant, roasted filbert, hops, mushroom, peas, peppermint, soybean products, spearmint, strawberry, black tea, tomato; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, soups, condiments, processed vegetables.

440. 1-OCTEN-3-YL ACETATE - FDA approved food additive; FEMA GRAS; found in Asparagus, avocado, beef, wheat bread, cabbage, capers, caviar, Mentha arvensis oil, mushroom, peppermint, "spearmint native", "spearmint scotch"; used in Snack foods.

441. 2-OCTENAL - FEMA GRAS; found in Asparagus, bacon fat, banana, beans, beef roast, bilberry, blue cheese, butter, cantaloupe, capers, chicken, cranberry, country ham, orange, pea, potato chip, rye crispbread, soybean, black tea, tomato; used in Baked goods, meat products, dairy products, snack foods.

442. OCTYL ISOBUTYRATE - FDA approved food additive; FEMA GRAS; found in Hops, plum; used in Baked goods.

443. OLEIC ACID - FDA approved food additive; FEMA GRAS; found in Apple, banana, grape, ginger, potato, strawberry, tomato, Virginia tobacco; used in Condiment relish.

444. OLIBANUM OIL - FDA approved food additive; FEMA GRAS; found in Gum resin exudate; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

445. OPOPONAX OIL AND GUM - FDA approved food additive; found in Opoponax, opoponax; used in Alcoholic beverages, FDA direct.

446. ORANGE BLOSSOMS WATER, ABSOLUTE AND LEAF ABSOLUTE - FDA GRAS; FEMA GRAS; found in Orange leaves; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.
447. ORANGE OIL AND EXTRACT - FDA GRAS; FEMA GRAS; found in *Citrus sinensis* L.; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum.
448. ORIGANUM OIL - FDA GRAS; FEMA GRAS; found in *Origanum* flowers; used in Soups.
449. ORRIS CONCRETE OIL AND ROOT EXTRACT - FDA approved food additive; FEMA GRAS; found in Orris roots; used in Gelatin pudding, alcoholic beverages.
450. PALMAROSA OIL - FDA GRAS; FEMA GRAS; found in *Geranium*, East Indian; used in Baked goods.
451. PALMITIC ACID - FEMA GRAS; found in Apple, beer, celery, cheddar cheese, roquefort, cognac, country ham, heated milk, potato, tomato, black tea; used in Meat products, baked goods.
452. PARSLEY SEED OIL - FDA GRAS; FEMA GRAS; found in Parsley; used in Soups.
453. PATCHOULY OIL - FDA approved food additive; FEMA GRAS; found in Dried leaves of *Pogostemon cablin* Benth.; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.
454. OMEGA-PENTADECALACTONE - FDA approved food additive; FEMA GRAS; found in Angelica oil; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, toppings.
455. 2,3-PENTANEDIONE - FDA approved food additive; FEMA GRAS; found in Ale, nuts, barley, beef, beer, bread, chicken, cocoa, coffee, cognac, malt, potato chip, rum, soybean, tomato, whiskey, yogurt; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.
456. 2-PENTANONE - FDA approved food additive; FEMA GRAS; found in Apple juice, banana, beef, butter oil, cheese, chicken, grape, ham, honey, peanut; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

457. 4-PENTENOIC ACID - FDA approved food additive; FEMA GRAS; found in Oriental tobacco, Virginia tobacco; used in Soft candy.

458. 2-PENTYLPYRIDINE - FEMA GRAS.

459. PEPPER OIL, BLACK AND WHITE - FDA GRAS; FEMA GRAS; found in Berries of *Piper nigrum*; used in Non-alcoholic beverages, ice cream, ices, baked goods, meats.

460. PEPPERMINT OIL - FDA GRAS; FEMA GRAS; found in *Mentha piperita* L.; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, toppings, candy, gelatin & puddings, chewing gum, meat products.

461. PERUVIAN (BOIS DE ROSE) OIL - FDA GRAS; FEMA GRAS; found in *Aniba rosaeodora*; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.

462. PETITGRAIN ABSOLUTE, MANDARIN OIL AND TERPENELESS OIL; FDA GRAS; FEMA GRAS; found in *Citrus aurantium*; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum.

463. ALPHA-PHELLANDRENE - FDA approved food additive; FEMA GRAS; found in Beans, carrots, grapefruit, cinnamon, lemon, mint, orange juice, orange, pepper; used in Non-alcoholic beverages, frozen dairy, condiments, baked goods, soft candy, meat products, gelatin & puddings.

464. 2-PHENETHYL ACETATE - FDA approved food additive; FEMA GRAS; found in Apple, banana, beer, bread, cinnamon, cocoa, cheese, cognac, grape, raisin, rum, strawberry, vinegar, whiskey, wine; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

465. PHENETHYL ALCOHOL - FDA approved food additive; FEMA GRAS; found in Apple cider, apple juice, banana, basil oil, heated beef, beer, brandy, white bread, cassia oil, cheese, cocoa, coconut, coffee, cognac, cranberry, fish, grape, guava, honey, hops, mango, mushroom, olive, orange juice, peppermint, potato; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

466. PHENETHYL BUTYRATE - FDA approved food additive; FEMA GRAS; found in Beer, grape, passion fruit, spearmint oil, strawberry, wine; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.

467. PHENETHYL CINNAMATE - FEMA GRAS; Reported to be found in nature; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.
468. PHENETHYL ISOBUTYRATE - FDA approved food additive; FEMA GRAS; found in Galanga oil, spearmint oil; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, candy, gelatin & puddings, chewing gum.
469. PHENETHYL ISOVALERATE - FDA approved food additive; FEMA GRAS; found in Peppermint oil, spearmint oil; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, candy, gelatin & puddings, chewing gum.
470. PHENETHYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; found in Filipendule ulamaria oil; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, cheese, candy, gelatin & puddings, chewing gum.
471. PHENETHYL SALICYLATE - FDA approved food additive; FEMA GRAS; found in Reported to occur in nature; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings.
472. 1-PHENYL-1-PROPANOL - FDA approved food additive; FEMA GRAS; found in Beer (bantu), chicken broth; used in Non-alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings, chewing gum.
473. 3-PHENYL-1-PROPANOL - FDA approved food additive; FEMA GRAS; found in Bilberry, cinnamon, honey, passion fruit, rose-apple, tea; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings, chewing gum.
474. 2-PHENYL-2-BUTENAL - FEMA GRAS; found in Almonds, roasted peanuts, cocoa, mushroom, potato chips, tea; used in Non-alcoholic beverages, ice cream, ices, baked goods, soft candy, gelatin & puddings.
475. 4-PHENYL-3-BUTEN-2-OL - FDA approved food additive; FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings.
476. 4-PHENYL-3-BUTEN-2-ONE - FDA approved food additive; FEMA GRAS; found in Beer, soy protein, galangal oil (false ginger oil); used in

Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, soft candy, hard candy, gelatin & puddings, fat/oil.

477. PHENYLACETALDEHYDE - FDA approved food additive; FEMA GRAS; found in Constituent of Citrus sinensis and magnolia, lily, and tea; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.

478. PHENYLACETIC ACID - FDA approved food additive; FEMA GRAS; found in Cocoa bean, honey, mushroom, passion fruit, roasted peanut, black pepper, potato, hydrolyzed soy protein, black tea, wine; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum, syrups.

479. L-PHENYLALANINE - FDA approved food additive; FEMA GRAS; found in Meats, eggs, breads, cereals, milk, cheese, fish, corn, beans, potatoes, asparagus, peas, nuts, dates; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, candy, gelatin & puddings, condiments, meat products.

480. 3-PHENYLPROPIONALDEHYDE - FDA approved food additive; FEMA GRAS; found in Beer, cooked chicken, cinnamon, tomato; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings, condiments, meat products, chewing gum.

481. 3-PHENYLPROPIONIC ACID - FDA approved food additive; FEMA GRAS; found in Cinnamon, mushroom, raspberry, whiskey, wine; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings, fats/oils.

482. 3-PHENYLPROPYL ACETATE - FDA approved food additive; FEMA GRAS; found in Constituent of Heracleum candicans; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, condiments.

483. 3-PHENYLPROPYL CINNAMATE - FDA approved food additive; FEMA GRAS; found in Oriental storax, American storax, Peru balsam from Honduras, Sumatra benzoin; used in Non-alcoholic beverages, frozen dairy, baked goods, candy, gelatin & puddings.

484. 2-(3-PHENYLPROPYL)TETRAHYDROFURAN - FDA approved food additive; FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, soft candy, gelatin & puddings, chewing gum.

485. PHOSPHORIC ACID - FEMA GRAS; Component of living organisms; used in Non-alcoholic beverages, ice cream, ices, imitation dairy, cheese, baked goods, candy, gelatin & puddings, meat products.

486. PIMENTA LEAF OIL - Found in *Pimenta officinalis*; used in Non-alcoholic beverages, ice cream, ices, candy, condiments, chewing gum, meat products.

487. PINE NEEDLE OIL - FDA approved food additive; FEMA GRAS; found in *Pinus mugo*; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy.

488. PINE OIL, SCOTCH - FDA approved food additive; FEMA GRAS; found in *Pinus sylvestris* L.; used in Non-alcoholic beverages, baked goods, candy.

489. PINEAPPLE JUICE CONCENTRATE - Found in Pineapple; Defined as a fruit juice under FDA Standards of Identity.

490. ALPHA-PINENE - FDA approved food additive; FEMA GRAS; found in Basil, bilberry, carrot, celery, cheese, cream, hops, grapefruit, orange, pepper, tomato, whiskey; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, condiments, soft candy, hard candy, gelatin & puddings, chewing gum, meat products.

491. BETA-PINENE - FDA approved food additive; FEMA GRAS; found in Basil, carrot, celery, cheese, cocoa, hops, lime, mint, orange juice, black pepper, peppermint; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, condiments, soft candy, hard candy, gelatin & puddings, chewing gum, meat products.

492. D-PIPERITONE - FDA approved food additive; FEMA GRAS; found in Eucalyptus oil, mint, mint oil, essential oil of orange, Japanese pepper, peppermint, peppermint oil, spearmint oil; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings.

493. PIPERONAL - FDA GRAS; FEMA GRAS; found in Chicken broth, black pepper, vanilla bean, vanilla extract; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

494. PIPSISSEWA LEAF EXTRACT - FDA GRAS; FEMA GRAS; found in *Chimaphila umbellata* (L.) Nutt.; used in Non-alcoholic beverages, candy.

495. PLUM JUICE - Found in Plum.

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496. POTASSIUM SORBATE - FDA GRAS; FEMA GRAS; Reported to occur in nature; used in foods with no limitation other than good manufacturing practice.
497. L-PROLINE - FDA approved food additive; FEMA GRAS; found in Bread, barley, cheese, cubed meat, fish, canned vegetables, fresh meat, fresh poultry, nuts, milk, fresh vegetables; used in Non-alcoholic beverages, baked goods, condiments, pickles, cereal, meat, meat sauces, dairy products.
498. PROPENYLGUAETHOL - FDA approved food additive; FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, candy, gelatin & puddings, chewing gum, sweet sauce.
499. PROPIONIC ACID - FDA GRAS; FEMA GRAS; found in Apple, apple juice, beef, beef broth, beer, blackberry juice, blueberry juice, bread, cheese, roasted cocoa bean, coffee, currant, grape juice, maple syrup, orange juice, pineapple juice, pork fat, raspberry, rum, strawberry; used in Non-alcoholic beverages, alcoholic beverages, baked goods, fruit, candy, gelatin & puddings, dairy products.
500. PROPYL ACETATE - FDA approved food additive; FEMA GRAS; found in Apple, apple essence, banana, cocoa, cognac, grape, wine, pear, pear juice, pineapple, rum, strawberry, tomato, whiskey; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.
501. PROPYL PARA-HYDROXYBENZOATE - FDA approved food additive; FEMA GRAS; Not reported to occur in nature; used in food in minimum amount required to produce effect in accordance with good manufacturing practices.
502. PROPYLENE GLYCOL - FDA GRAS; FEMA GRAS; found in Mushroom; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, fats & oils, candy, gelatin & puddings, chewing gum, cheese.
503. 3-PROPYLIDENEPHTHALIDE - FDA approved food additive; FEMA GRAS; Nature identical by FEMA; used in Ice cream, ices, baked goods, candy.
504. PRUNE JUICE AND CONCENTRATE - Found in Prune; Defined as a fruit juice under FDA Standards of Identity.
505. PYRIDINE - FDA approved food additive; FEMA GRAS; found in Roasted barley, bean (dry red, snap), canned beef stew, bread, caviar (salmon, sturgeon), cheese (parmesan, Russian), cocoa, coffee (ground, roasted), fish, roasted onion, roasted peanut & pecan, popcorn, potato (baked, chip, cooked), rum, tea, tomato;

used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, gravies, meat products.

506. PYROLIGNEOUS ACID AND EXTRACT - FDA approved food additive; FEMA GRAS; found in Birch tree; used in Alcoholic beverages, baked goods, meat products.

507. PYRROLE - FEMA GRAS; found in White bread, cocoa, coffee (ground, roasted), crispbread, egg, peanut (roasted); used in Ice cream, ices, baked goods, cereals, candy, gelatin & puddings, meat products.

508. PYRUVIC ACID - FDA approved food additive; FEMA GRAS; found in Apple, apple cider, barley sprouts, bean (fodder), beer, bread volatiles, buckwheat sprouts, cabbage, celery, cheese (Camembert, cheddar, German blue, Swiss), brewed coffee, groundnut, honey, onion, pea sprouts, shallots, wine ; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, soft candy, gelatin & puddings, meat products.

509. RAISIN JUICE CONCENTRATE - Found in Raisin.

510. RHODINOL - FDA approved food additive; FEMA GRAS; found in Geranium oil; used in Non-alcoholic beverages, ice cream, ices, baked goods, jellies, candy, gelatin & puddings, chewing gum.

511. ROSE ABSOLUTE AND OIL - FDA GRAS; FEMA GRAS; found in Rosa damascena; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

512. ROSEMARY OIL - FDA GRAS; FEMA GRAS; found in Flowers of Rosmarinus officinalis; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, meats.

513. RUM.

514. RUM ETHER - FDA approved food additive; FEMA GRAS; found in Rum; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, hard candy, soft candy, gelatin & puddings, chewing gum.

515. RYE EXTRACT - Found in Rye.

516. SAGE, SAGE OIL, AND SAGE OLEORESIN - FDA GRAS; FEMA GRAS; found in Salvia officinalis L.; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, pickles, chewing gum, meat products.

517. SALICYLALDEHYDE - FDA approved food additive; FEMA GRAS; found in Flowers of Spirea ulmaria; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, condiments.

518. SANDALWOOD OIL, YELLOW - FDA approved food additive; FEMA GRAS; found in Sandalwood Mysore-evergreen tree roots of Santalum album; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.

519. SCLAREOLIDE - FEMA GRAS; found in Reported to occur in nature; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, baked goods, breakfast cereals, milk products, hard candy, soft candy, gelatin & puddings, snack foods, meat products, imitation dairy.

520. SKATOLE - FDA approved food additive; FEMA GRAS; found in Cheese, egg, fish, tea, trassi; used in Non-alcoholic beverages, alcoholic beverages, frozen dairy, soft candy, gelatin & puddings, baked goods.

521. SMOKE FLAVOR - Found in Hickory-wood smoke distillate; used in Baked goods, cheese, meats, reconstituted vegetable protein.

522. SNAKEROOT OIL - FDA approved food additive; FEMA GRAS; found in Wild ginger.

523. SODIUM ACETATE - FDA GRAS; FEMA GRAS; found in Plant and animal tissues; used in Cereals, fats & oils, grain products, pastas, snack foods, candy, jams, jellies, meat products, soups, soups mixes, sweet sauces.

524. SODIUM BENZOATE - FDA GRAS; FEMA GRAS; Not known to occur naturally; used in Food as served, dietary supplements, oleomargarine, collagen casings.

525. SODIUM BICARBONATE - Natural mineral; used in food with no limitation other than good manufacturing practices; main component of baking powder and baking soda.

526. SODIUM CARBONATE - FDA GRAS.

527. SODIUM CHLORIDE - FDA GRAS; used in Brewing.

528. SODIUM CITRATE - FDA GRAS; FEMA GRAS; used in Evaporated milk, general purpose food additive.

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529. SODIUM HYDROXIDE - Used in Meat & poultry, oleo and margarine.

530. SOLANONE - Found in Tobacco.

531. SPEARMINT OIL - FDA GRAS; FEMA GRAS; found in Spearmint; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, jellies.

532. STYRAX EXTRACT, GUM AND OIL - FDA approved food additive; FEMA GRAS; found in Sweet gum; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum, toppings.

533. SUCROSE OCTAACETATE - FDA approved food additive; FEMA GRAS; found in Ginger ale; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.

534. SUGAR ALCOHOLS - FDA GRAS; FEMA GRAS; found in Synthetic combination and natural starting materials (glucose and sorbitol), cherry, plum, pear, apple, seaweed, molasses
; used in Sugar free non-dairy whipped topping, granola bars, hard candy, soft candy, chewing gum, dairy products, gelatin & puddings, meat products, poultry, non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, jams, jellies.

535. SUGARS - FDA GRAS; FEMA GRAS; Composed of naturally occurring components, e.g. fructose (fruit sugar), other saccharides (sugars), glucose, honey, corn starch, corn syrup, structural component of bacterial cell walls, purified concentrated aqueous solution of nutritive saccharides obtained from edible starch; used in Non-alcoholic beverages, alcoholic beverages, alcohol, sweet sauces, candy, chewing gum, baked goods, nuts, ham, sausage, cured meat, gelatin & puddings, dairy products, poultry products, breakfast cereals.

536. TAGETES OIL - FDA approved food additive; FEMA GRAS; found in Marigold; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, condiments (as oil only).

537. TANNIC ACID - FDA GRAS; FEMA GRAS; found in Quercus and bark of many fruits and plants; used in Baked goods and mixes, alcoholic beverages, non-alcoholic beverages, beverages bases, gelatins, puddings & fillings, frozen dairy desserts, mixes and soft candy, hard candy and cough drops, meat products.

538. TARTARIC ACID - FDA GRAS; FEMA GRAS; found in Orange and grape juice; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, condiments.

539. TEA LEAF AND ABSOLUTE - FDA GRAS; found in *Thea sinensis*; Natural flavor extractive.

540. ALPHA-TERPINEOL - FDA approved food additive; FEMA GRAS; found in Apricot, basil, snap bean, beer, carrot, celery, chicken broth, cocoa powder, coffee, cranberry, black currant, ginger, grape, grapefruit, honey, hops, lemon, lime; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, gelatin & puddings, chewing gum.

541. TERPINOLENE - FDA approved food additive; FEMA GRAS; found in Lemons; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

542. TERPINYL ACETATE - FDA approved food additive; FEMA GRAS; found in Anise oil, basil oil, celery, cocoa powder, black currants, ginger, grapefruit oil, orange, orange juice, pepper, clary sage, tea, thyme, tomato; used in Non-alcoholic beverages, ice cream, ices, baked goods, condiments, candy, chewing gum, meats.

543. 5,6,7,8-TETRAHYDROQUINOXALINE - FEMA GRAS; found in Filbert, peanut, cooked beef and pork, meat, cocoa, coffee, nuts, sesame seed; used in Non-alcoholic beverages, baked goods, condiments, candy, gelatin & puddings, dairy products.

544. 1,5,5,9-TETRAMETHYL-13-OXATRICYCLO (8.3.0.0(4,9)) TRIDECANE - FEMA GRAS; found in Clary sage oil; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.

545. 2,3,4,5 AND 3,4,5,6-TETRAMETHYLETHYL- FDA approved food additive; FEMA GRAS; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

546. 2,3,5,6-TETRAMETHYLPYRAZINE - FEMA GRAS; found in Cooked beef, beer, cheese, cocoa, coffee, roasted filbert, mushroom, roasted peanut, soy products, tea, wine; used in Non-alcoholic beverages, baked goods, condiments, candy, dairy products, meat, meat sauces.

547. THIAMINE HYDROCHLORIDE - FDA GRAS; FEMA GRAS; found in Rice husk, cereal grains, yeast, liver, eggs; used in Nutrient supplement in food.

548. THIAZOLE - FEMA GRAS; found in Coffee aroma, component of the structure of vitamin b1 (Thiamine) which occurs in seeds, meat and milk.
549. L-THREONINE - FDA approved food additive; found in Eggs, skim milk, casein and nuts, oranges and lemons.
550. THYME OIL, WHITE AND RED - FDA GRAS; FEMA GRAS; found in Thyme; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum, condiments, meats, soups, alcoholic beverages.
551. THYMOL - FDA approved food additive; FEMA GRAS; found in Mandarin oranges, Thyme camphor; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum.
552. TOBACCO EXTRACTS - Found in Tobacco plants.
553. TOCHOPHEROLS (MIXED) - FDA GRAS; found in Soybean oil, wheat germ oil, peanut oils, oranges, lemons; used in Fat content of foods, pump-cured bacon.
554. TOLU BALSAM GUM AND EXTRACT - FDA approved food additive; FEMA GRAS; from the tree, Myroxylon balsamurr; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, syrups.
555. TOLUALDEHYDES (ORTHO,META,PARA) - FDA approved food additive; FEMA GRAS; found in Roasted nuts; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, maraschino cherries.
556. PARA-TOLYL 3-METHYLBUTYRATE - FEMA GRAS; No natural occurrence cited; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatins & puddings.
557. PARA-TOLYL ACETALDEHYDE - FEMA GRAS; used in Ice cream, ices, candy, baked goods.
558. PARA-TOLYL ACETATE - FDA approved food additive; FEMA GRAS; no natural occurrence cited; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum, condiments.
559. PARA-TOLYL ISOBUTYRATE - FEMA GRAS; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

560. PARA-TOLYL PHENYLACETATE - FDA approved food additive; FEMA GRAS; no natural occurrence cited; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, cheese.
561. TRIACETIN - FDA GRAS; FEMA GRAS; no natural occurrence cited; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, chewing gum.
562. 2-TRIDECANONE - FEMA GRAS; found in Cheese, coffee, coconut oil, hops; used in Ice cream, ices, baked goods, margarine, candy, gelatin & puddings.
563. 2-TRIDECENAL - FDA approved food additive; FEMA GRAS; found in Sunguli oil; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum.
564. TRIETHYL CITRATE - FDA GRAS; FEMA GRAS; found in Cherry, red currant; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, candy, gelatin & puddings, baked goods.
565. 3,5,5-TRIMETHYL-1-HEXANOL - FEMA GRAS; used in Baked goods, condiments, pickles.
566. PARA,ALPHA,ALPHA-TRIMETHYLBENZYL ALCOHOL - FEMA GRAS; found in Citrus fruits, cranberry, bilberry, currants, mint, pepper; used in Beverages, candy, gelatins & puddings.
567. 4-(2,6,6-TRIMETHYLCYCLOHEX-1-ENYL)BUT-2-EN-4-ONE - FEMA GRAS; nature identical by FEMA; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.
568. 2,6,6-TRIMETHYLCYCLOHEX-2-ENE-1,4-DIONE - FEMA GRAS; found in Saffron, black tea; used in Non-alcoholic beverages, candy.
569. 2,6,6-TRIMETHYLCYCLOHEXA-1,3-DIENYL METHAN; FEMA GRAS; used in Candy, baked goods, condiments, pickles, preserves and spreads.
570. 4-(2,6,6-TRIMETHYLCYCLOHEXA-1,3-DIENYL)BUT-2-EN-4-ONE; FEMA GRAS; found in Apples (cooked), black tea, Riesling wine; used in Beverages, frozen dessert, baked goods, candy, gelatin & puddings, preserves, condiments.

571. 2,2,6-TRIMETHYLCYCLOHEXANONE - FEMA GRAS; found in Bilberry, passion fruit, tea; used in Non-alcoholic beverages, frozen dessert, confectionery, ice cream, ices, candy.
572. 2,3,5-TRIMETHYLPYRAZINE - FEMA GRAS; found in Bakery products, roasted barley, cocoa products, coffee, dairy products, meat, peanut, filbert, pecan, popcorn, rum, whiskey, potato products, soy products; used in Non-alcoholic beverages, baked goods, condiments, candy, dairy products, cereals, meat.
573. L-TYROSINE - FDA approved food additive; FEMA GRAS; found in Nuts, oranges and lemons; not to exceed 4.3% by weight in finished product.
574. DELTA-UNDECALACTONE - FEMA GRAS; found in Coconut flavor, beef, butter, coconut, milk; used in Non-alcoholic beverages, ice cream, ices, baked goods, meat sauce, candy, dairy products, cereals.
575. GAMMA-UNDECALACTONE - FDA approved food additive; FEMA GRAS; found in Hydrolyzed soy protein, passion fruit, butter, peach, apricot; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.
576. UNDECANAL - FDA approved food additive; FEMA GRAS; found in Mandarin, grapefruit and lemon; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, chewing gum.
577. 2-UNDECANONE - FDA approved food additive; FEMA GRAS; found in Coconut and palm oil, banana, beer, beef, cheese, cocoa, coffee, wine, milk, mushroom, peanut, strawberry; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, dairy products.
578. 10-UNDECENAL - FDA approved food additive; FEMA GRAS; used in Non-alcoholic beverages, ice cream, ices, candy.
579. UREA - FDA GRAS; Final degradation product of protein metabolism in animals, in plants as non-proteinaceous nitrogen, 4.5% of total nitrogen in oats; used in Fermentation aid in production of alcoholic beverages, yeast-raised bakery products and formulation aid in gelatin.
580. VALENCENE - FEMA GRAS; found in Oranges and cocoa; used in Non-alcoholic and alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, milk, dairy products, cereals.

581. VALERALDEHYDE - FDA approved food additive; FEMA GRAS; found in Brazilian sassafras, Bulgarian rose, Bulgarian clary sage; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

582. VALERIAN ROOT EXTRACT, OIL AND POWDER - FDA approved food additive; FEMA GRAS; found in the rhizomes and roots of *Valeriana officinalis* L.; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, chewing gum.

583. VALERIC ACID - FDA approved food additive; FEMA GRAS; found in Pineapple, lemon petitgrain oil as acid or corresponding ester; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

584. GAMMA-VALEROLACTONE - FEMA GRAS; found in Boiled beef, beef fat, beer, cocoa, cheese, coffee, roasted filbert, milk fat, dried mushroom, peach, roasted peanut, tea, yogurt; used in Non-alcoholic beverages, alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, meat products.

585. VALINE - FDA approved food additive; FEMA GRAS; found in Fruit, plant and animal tissues, milk and dairy products, nuts, oranges, lemons, tangerines, grapefruits; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods, gelatins & puddings, chewing gum, milk and dairy products.

586. VANILLA EXTRACT AND OLEORESIN - FDA GRAS; FEMA GRAS; found in vanilla bean, *V. fragrans*; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings, condiments.

587. VANILLIN - FDA GRAS; FEMA GRAS; found in Anise, asparagus, roasted barley, beer, brandy, bread, maple sap, maple syrup, evaporated milk, dried mushroom, popcorn, rum, spearmint oil, tomato, vanilla extract & pods, rice, vinegar, whiskey, wine; used in non-alcoholic beverages, ice cream, ices, baked goods, syrups, candy, gelatin & puddings, chewing gum, chocolate.

588. VERATRALDEHYDE - FDA approved food additive; FEMA GRAS; found in Cassia oil, vanilla extract; used in Non-alcoholic beverages, ice cream, ices, baked goods, candy, gelatin & puddings.

589. VETIVER OIL - FDA approved food additive; found in Root of *Vetiveria zizanoides* Stapt.; used in Used in food in the minimum quantity required to produce intended physical or technical effect and in accordance with all principles of the good manufacturing practices.

590. VINEGAR - Derived from fermentable sugars such as fruit juices and honey. At least 4 g. acetic acid/100 ml vinegar; used as Anti-microbial agent for sour taste in catsup, mayonnaise, pickles.

591. VIOLET LEAF ABSOLUTE - FDA GRAS; FEMA GRAS; found in the plant *Viola odorata*; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

592. WALNUT HULL EXTRACT - FDA approved food additive; FEMA GRAS; found in Walnut; used in Non-alcoholic beverages, ice cream, ices, candy, baked goods.

593. WATER.

594. WHEAT EXTRACT AND FLOUR - found in Wheat.

595. WILD CHERRY BARK EXTRACT - FDA GRAS; FEMA GRAS; found in Cherry trees.

596. WINE AND WINE SHERRY.

597. XANTHAN GUM - FDA approved food additive; found in *Xanthomonas campestris*.

598. 3,4-XYLENOL - FEMA GRAS; found in Coffee, wood vinegar; used in Baked goods, meat, soups, coffee, nuts.

599. YEAST - FDA approved food additive; found in *Saccharomyces cerevisiae* and *saccharomyces fragilis*.