

GRAS Flavoring Substances 29

29. GRAS Flavoring Substances. This list of substances will appear in the 29th publication authored by the Expert Panel of the Flavor and Extract Manufacturers Association on recent progress in the consideration of flavoring ingredients “generally recognized as safe” (GRAS) under conditions of their intended use in food flavorings in accordance with the 1958 Food Additives Amendment to the Federal Food, Drug and Cosmetic Act. For more information on FEMA GRAS™ see “About the FEMA GRAS Program” on the FEMA website.

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The Expert Panel of the Flavor and Extract Manufacturers Association of the United States (FEMA) has evaluated substances for GRAS status under their conditions of intended use as flavoring substances since the early 1960s. The regulations of the U.S. Food and Drug Administration (FDA), and U.S. law, require that determinations that flavor substances and other food ingredients are “generally recognized as safe” (GRAS) be done in such a way that all information related to GRAS determinations is publicly available. The FEMA Expert Panel has met this requirement by publishing the identity of all flavoring substances determined to be GRAS by the Panel, and has submitted all information related to its GRAS reviews on these substances to the FDA for inclusion in the FDA databases. Information that was reviewed by the Expert Panel in the course of their evaluation of new flavoring substances is typically submitted to FDA within six months of the publication of their identity. The Expert Panel also publishes separate extensive reviews of scientific information on all FEMA GRAS flavoring substances in the peer-reviewed scientific literature in the form of reports on the safety of structurally-related groups of flavoring substances. These important actions assure that there is “general recognition” of the safety of these substances when used as flavors.

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Ethyl Nitrite DeGRAS

The FEMA GRAS status of ethyl nitrite (FEMA 2446) under the conditions of intended use as a flavor ingredient was reviewed. The Expert Panel concluded that additional data including testing for vascular effects and GLP-compliant *in vitro* and *in vivo* genotoxicity testing are required for the continuation of its GRAS status. Until such studies become available the flavor ingredient ethyl nitrite has been removed from the GRAS list.

Table 1. Primary names (in boldface) Synonyms (in lightface)

FEMA No.	Primary Names and Synonyms
4880	2-(4-Ethylphenoxy)-N-(1<i>H</i>-pyrazol-3-yl)-N-(thiophen-2-ylmethyl)acetamide 2-(4-Ethylphenoxy)-N-(1 <i>H</i> -pyrazol-5-yl)-N-(thiophen-2-ylmethyl)acetamide
4881	N-(3-Hydroxy-4-methoxyphenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide
4882	N-(4-(Cyanomethyl)phenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide
4884	6-Methyl-5-hepten-2-ol (+/-)-6-Methyl-5-hepten-2-ol Sulcatol (+/-)-Sulcatol 2-Methyl-2-hepten-6-ol 6-Hydroxy-2-methyl-2-heptene 6-Methylhept-5-en-2-ol
4890	3-<i>p</i>-Menthen-7-al
4891	(<i>E</i>)-3-Methyl-4-dodecenoic acid
4892	<i>cis</i>-2-Hexylcyclopropaneacetic acid
4895	Rebaudioside M
4896	N-(2-Hydroxy-2-phenylethyl)-2-isopropyl-5,5-dimethylcyclohexane-1-carboxamide
4897	Allulose D-Psicose
4898	<i>trans</i>-5-Octenal
4899	N-(1-((4-amino-2,2-dioxido-1<i>H</i>-benzo[<i>c</i>][1,2,6]thiadiazin-5-yl)oxy)-2-methylpropan-2-yl)-2,6-dimethylisonicotinamide
4901	O-Ethyl S-(3-methylbut-2-en-1-yl)thiocarbonate Carbonothioic acid, O-ethyl S-(3-methyl-2-buten-1-yl) ester
4903	Ethyl 3-methyl-2-oxopentanoate
4909	Glucosylated steviol glycosides, 70-80%
4910	Glucosylated steviol glycosides, 40%
4914	<i>bis</i>-(3-Methyl-2-butenyl)disulfide <i>bis</i> (3-Methyl-2-buten-1-yl) disulfide
4915	(5<i>Z</i>)-3,4-Dimethyl-5-propylidene-2(5<i>H</i>)-furanone
4916	2-Methyl-3-butene-2-thiol α,α -Dimethyl allyl mercaptan
4917	(<i>Z</i>)-9-Dodecenoic acid (9 <i>Z</i>)-9-Dodecenoic acid 9-Dodecenoic acid, (<i>Z</i>)- <i>cis</i> -9-Dodecenoic acid Lauroleic acid
4920	1-Ethyl-2-(1-pyrrolylmethyl)pyrrole
4921	Rebaudioside D, 95%
4922	Rebaudioside M, 95%
4926	(<i>Z</i>)-8-Pentadecenal
4928	2-Methylthiophene
4929	4-Methylidene-2-(2-methylprop-1-enyl)oxane
4930	4-Isopropoxycinnamaldehyde
4931	Glucosylated steviol glycosides, 90%
4934	Sodium Gluconate
4936	Rebaudioside E \geq85%
4937	Rebaudioside I 95%
4940	beta-Bisabolene \geq88%
4941	Nootkatone Complex

Table 2. Average Usual Use Levels (ppm)/Average Maximum Use Levels (ppm) on which the FEMA Expert Panel based its judgments that the substances are generally recognized as safe (GRAS)

	2-(4-Ethylphenoxy)-N-(1H-pyrazol-3-yl)-N-(thiophen-2-ylmethyl)acetamide	N-(3-Hydroxy-4-methoxyphenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide	N-(4-(Cyanomethyl)phenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide	6-Methyl-5-hepten-2-ol	3- <i>p</i> -Menthen-7-ol
Category/FEMA No.	4880	4881	4882	4884	4890
Baked Goods	3/15	0/0	0/0	10/50	0.001/0.01
Beverages, Non-Alcoholic	1/3	0.1/10	0.1/10	5/25	0.0003/0.005
Beverages, Alcoholic	2/6	0.1/10	0.1/10	10/50	0.0003/0.005
Breakfast Cereals	3/15	0/0	0/0	5/25	0/0
Cheeses	0/0	0/0	0/0	7/35	0.001/0.01
Chewing Gum	75/150	1/100	1/100	0/0	0.001/0.01
Condiments and Relishes	3/15	0.1/10	0.1/10	5/25	0.01/0.1
Confections and Frostings	5/30	1/100	1/100	10/50	0.001/0.01
Egg Products	3/15	0/0	0/0	0/0	0/0
Fats and Oils	3/15	0.05/5	0.05/5	5/25	0.01/0.1
Fish Products	0/0	0/0	0/0	2/10	0/0
Frozen Dairy	1/3	0.1/10	0.1/10	0/0	0.001/0.01
Fruit Ices	1/3	0.1/10	0.1/10	10/50	0.0005/0.01
Gelatins and Puddings	1/3	0.05/5	0.05/5	0/0	0.0005/0.01
Granulated Sugar	0/0	0/0	0/0	0/0	0/0
Gravies	3/15	0.05/5	0.05/5	5/25	0/0
Hard Candy	5/15	0.1/10	0.1/10	0/0	0.001/0.01
Imitation Dairy	1/3	0.05/5	0.05/5	7/35	0/0
Instant Coffee and Tea	1/3	0.01/1	0.01/1	5/25	0/0
Jams and Jellies	1/3	0.1/10	0.1/10	20/100	0.0005/0.01
Meat Products	3/15	0/0	0/0	2/10	0.001/0.01
Milk Products	1/3	0.05/5	0.05/5	7/35	0/0
Nut Products	1/3	0/0	0/0	0/0	0/0
Other Grains	0/0	0/0	0/0	5/25	0/0
Poultry	3/15	0/0	0/0	2/10	0/0
Processed Fruits	1/3	0/0	0/0	7/35	0/0
Processed Vegetables	3/15	0/0	0/0	0/0	0/0
Reconstituted Vegetable Protein	3/15	0/0	0/0	0/0	0/0
Seasonings and Flavors	3/15	3/900	3/900	5/25	0.05/0.3
Snack Foods	3/15	0.1/10	0.1/10	10/50	0.003/0.1
Soft Candy	5/15	0.1/10	0.1/10	0/0	0.001/0.01
Soups	3/15	0.1/10	0.1/10	5/25	0.0005/0.01
Sugar Substitutes	0/0	0.005/0.5	0.005/0.5	0/0	0/0
Sweet Sauces	5/15	0.5/50	0.5/50	5/25	0.001/0.01

Table 2. Average Usual Use Levels (ppm)/Average Maximum Use Levels (ppm) on which the FEMA Expert Panel based its judgments that the substances are generally recognized as safe (GRAS)

	(E)-3-Methyl-4-dodecenoic acid	cis-2-Hexylcyclopropaneacetic acid	Rebaudioside M	N-(2-Hydroxy-2-phenylethyl)-2-isopropyl-5,5-dimethylcyclohexane-1-carboxamide	Allulose
Category/FEMA No.	4891	4892	4895	4896	4897
Baked Goods	0.1/1	0.001/0.01	0/0	0/0	0/0
Beverages, Non-Alcoholic	0.001/0.1	0.0002/0.005	15/20	1/100	15000/20000
Beverages, Alcoholic	0.001/0.1	0.0002/0.005	0/0	1/100	0/0
Breakfast Cereals	0/0	0/0	0/0	0/0	0/0
Cheeses	0/0	0/0	0/0	0/0	0/0
Chewing Gum	0.001/0.1	0.001/0.01	0/0	10/1000	0/0
Condiments and Relishes	0/0	0.001/0.01	0/0	1/100	0/0
Confections and Frostings	0.001/0.3	0.0005/0.005	0/0	10/1000	0/0
Egg Products	0.001/0.3	0.0005/0.005	0/0	0/0	0/0
Fats and Oils	0.01/0.1	0.01/0.1	0/0	0.5/50	0/0
Fish Products	0.001/0.3	0.001/0.01	0/0	0/0	0/0
Frozen Dairy	0.001/0.2	0.001/0.01	15/20	1/100	0/0
Fruit Ices	0.001/0.2	0.0005/0.005	15/20	1/100	0/0
Gelatins and Puddings	0.01/0.1	0.0005/0.005	0/0	0.5/50	0/0
Granulated Sugar	0/0	0/0	0/0	0/0	0/0
Gravies	0.001/0.05	0/0	0/0	0.5/50	0/0
Hard Candy	0.001/0.3	0.001/0.01	0/0	1/100	0/0
Imitation Dairy	0.0001/0.05	0.001/0.01	15/20	0.5/50	0/0
Instant Coffee and Tea	0.0001/0.1	0.0002/0.005	15/20	0.1/10	0/0
Jams and Jellies	0/0	0.0005/0.005	0/0	1/100	0/0
Meat Products	0/0	0/0	0/0	0/0	0/0
Milk Products	0.001/0.05	0.001/0.01	15/20	0.5/50	0/0
Nut Products	0.001/0.05	0.001.0.01	0/0	0/0	0/0
Other Grains	0/0	0/0	0/0	0/0	0/0
Poultry	0/0	0/0	0/0	0/0	0/0
Processed Fruits	0/0	0/0	15/20	0/0	0/0
Processed Vegetables	0/0	0/0	0/0	0/0	0/0
Reconstituted Vegetable Protein	0/0	0/0	0/0	0/0	0/0
Seasonings and Flavors	0.01/2	0.01/0.2	0/0	30/9000	0/0
Snack Foods	0.001/0.3	0.001/0.01	0/0	1/100	0/0
Soft Candy	0.001/0.3	0.001/0.01	0/0	1/100	0/0
Soups	0.0001/0.3	0.0002/0.005	0/0	1/100	0/0
Sugar Substitutes	0.001/0.05	0/0	0/0	0.05/5	0/0
Sweet Sauces	0/0	0.001/0.01	0/0	5/500	0/0

Table 2. Average Usual Use Levels (ppm)/Average Maximum Use Levels (ppm) on which the FEMA Expert Panel based its judgments that the substances are generally recognized as safe (GRAS)

	<i>trans</i> -5-Octenal	<i>N</i> -(1-(4-amino-2,2-dioxido-1 <i>H</i> -benzo[<i>c</i>][1,2,6]thiazin-5- <i>yl</i>)oxy)-2-methylpropan-2- <i>yl</i>)-2,6-dimethylisonicotinamide	<i>O</i> -ethyl- <i>S</i> -(3-methylbut-2-en-1- <i>yl</i>)thiocarbonate	Ethyl 3-methyl-2-oxopentanoate	Glucosylated steviol glycosides, 70-80%
Category/FEMA No.	4898	4899	4901	4903	4909
Baked Goods	5/50	0/0	0/0	10/100	0/0
Beverages, Non-Alcoholic	2.5/25	15/15	0.0001/0.003	5/50	55/65
Beverages, Alcoholic	2.5/25	0/0	0.0002/0.006	2.5/25	0/0
Breakfast Cereals	10/100	0/0	0.005/0.015	5/50	0/0
Cheeses	0/0	0/0	0/0	0/0	0/0
Chewing Gum	50/250	0/0	0/0	10/100	0/0
Condiments and Relishes	0/0	0/0	0/0	0/0	0/0
Confections and Frostings	5/50	0/0	0.005/0.015	5/50	0/0
Egg Products	0/0	0/0	0/0	0/0	0/0
Fats and Oils	3/30	0/0	0/0	5/50	0/0
Fish Products	3/30	0/0	0/0	0/0	0/0
Frozen Dairy	5/50	0/0	0.005/0.015	5/50	55/65
Fruit Ices	5/50	0/0	0/0	5/50	0/0
Gelatins and Puddings	10/100	0/0	0.005/0.015	5/50	0/0
Granulated Sugar	0/0	0/0	0/0	0/0	0/0
Gravies	0.5/5	0/0	0/0	0/0	0/0
Hard Candy	10/50	0/0	0.005/0.015	10/100	0/0
Imitation Dairy	3/30	6/15	0.0001/0.003	2.5/25	55/65
Instant Coffee and Tea	5/50	6/15	0.0001/0.003	5/50	55/65
Jams and Jellies	5/50	0/0	0.005/0.015	2.5/25	0/0
Meat Products	0/0	0/0	0/0	0/0	0/0
Milk Products	3/30	6/15	0.0001/0.003	2.5/25	55/65
Nut Products	3/30	0/0	0.005/0.015	5/50	0/0
Other Grains	0/0	0/0	0/0	5/50	0/0
Poultry	0/0	0/0	0/0	0/0	0/0
Processed Fruits	0/0	0/0	0/0	0/0	0/0
Processed Vegetables	0/0	0/0	0/0	0/0	0/0
Reconstituted Vegetable Protein	0/0	0/0	00	0/0	0/0
Seasonings and Flavors	0/0	0/0	0/0	10/100	0/0
Snack Foods	15/150	0/0	0.005/0.015	2.5/25	0/0
Soft Candy	10/100	0/0	0.005/0.015	5/50	0/0
Soups	0.5/5	0/0	0/0	2.5/25	0/0
Sugar Substitutes	0/0	0/0	0/0	0/0	0/0
Sweet Sauces	10/100	0/0	0.005/0.015	2.5/25	0/0

Table 2. Average Usual Use Levels (ppm)/Average Maximum Use Levels (ppm) on which the FEMA Expert Panel based its judgments that the substances are generally recognized as safe (GRAS)

	Glucosylated steviol glycosides, 40%	bis-(3-Methyl-2-butenyl)disulfide	(5Z)-3,4-Dimethyl-5-propylidene- 2(5H)-furanone	2-Methyl-3-butene-2-thiol	(Z)-9-Dodecenoic acid
Category/FEMA No.	4910	4914	4915	4916	4917
Baked Goods	30/135	0.1/1	0/0	0.001/0.05	1/10
Beverages, Non-Alcoholic	30/135	0.005/0.05	0.01/0.1	0.0001/0.002	0.02/0.2
Beverages, Alcoholic	30/135	0.005/0.05	0.01/0.1	0.0001/0.002	0.02/0.2
Breakfast Cereals	30/135	0.1/1	0/0	0/0	0.05/5
Cheeses	30/135	0.1/1	0/0	0.0005/0.005	0.2/2
Chewing Gum	30/135	0.1/1	0/0	0.001/0.02	0.1/1
Condiments and Relishes	30/135	0.1/1	0.1/1	0.001/0.01	0.1/1
Confections and Frostings	30/135	0.1/1	0/0	0.0005/0.005	0.1/1
Egg Products	0/0	0.1/1	0/0	0.0002/0.002	0.05/0.5
Fats and Oils	30/135	0.1/1	0/0	0/0	0.5/5
Fish Products	0/0	0.1/1	0/0	0/0	0.05/0.5
Frozen Dairy	30/135	0.1/1	0/0	0.0002/0.003	0.05/0.5
Fruit Ices	30/135	0.1/1	0.001/0.01	0.0002/0.003	0.05/0.5
Gelatins and Puddings	30/135	0.1/1	0.001/0.01	0.0002/0.003	0.05/0.5
Granulated Sugar	0/0	0.1/1	0/0	0/0	0/0
Gravies	30/135	0.1/1	0/0	0.001/0.01	0.05/0.5
Hard Candy	30/135	0.1/1	0.1/5	0.001/0.01	0.05/0.5
Imitation Dairy	30/135	0.1/1	0/0	0/0	0.5/5
Instant Coffee and Tea	30/135	0.1/1	0.01/0.1	0.0003/0.005	0.02/0.2
Jams and Jellies	30/135	0.1/1	0/0	0/0	0.05/0.5
Meat Products	0/0	0.1/1	0/0	0.001/0.01	0.05/0.5
Milk Products	30/135	0.1/1	0.01/0.1	0.0001/0.002	0.5/5
Nut Products	30/135	0.1/1	0/0	0/0	0.05/0.5
Other Grains	30/135	0.1/1	0/0	0/0	0.05/0.5
Poultry	0/0	0.1/1	0/0	0/0	0.05/0.5
Processed Fruits	30/135	0.1/1	0/0	0/0	0/0
Processed Vegetables	30/135	0.1/1	0/0	0/0	0/0
Reconstituted Vegetable Protein	0/0	0.1/1	0/0	0/0	0/0
Seasonings and Flavors	30/135	0.1/1	0.01/0.1	0.1/1	0.05/0.5
Snack Foods	30/135	0.1/1	0.01/0.1	0.005/0.1	0.05/0.5
Soft Candy	30/135	0.1/1	0/0	0.001/0.01	0.10/1
Soups	30/135	0.1/1	0/0	0.003/0.005	0.02/0.2
Sugar Substitutes	0/0	0.1/1	0/0	0/0	0/0
Sweet Sauces	30/135	0.1/1	0.1/5	0.001/0.01	0.05/2

Table 2. Average Usual Use Levels (ppm)/Average Maximum Use Levels (ppm) on which the FEMA Expert Panel based its judgments that the substances are generally recognized as safe (GRAS)

	1-Ethyl-2-(1-pyrrolylmethyl)pyrrole	Rebaudioside D, 95%	Rebaudioside M, 95%	(Z)-8-Pentadecenal	2-Methylthiophene	4-Methylidene-2-(2-methylprop-1-enyl)oxane
Category/FEMA No.	4920	4921	4922	4926	4928	4929
Baked Goods	0.00001/0.002	15/32.5	10/24	0.001/0.1	0.3/10	0/0
Beverages, Non-Alcoholic	0.00001/0.002	15/32.5	10/24	0.00002/0.002	0.1/5	0.01/0.5
Beverages, Alcoholic	0.00001/0.002	15/32.5	10/24	0.00002/0.002	0.1/5	0.01/0.5
Breakfast Cereals	0/0	15/32.5	10/24	0.0001/0.005	0.3/10	0.1/5
Cheeses	0/0	0/0	0/0	0.0002/0.02	0.1/5	0/0
Chewing Gum	0/0	200/325	10/240	0.0001/0.01	0.1/5	0.03/1.5
Condiments and Relishes	0.00001/0.002	15/32.5	10/24	0.0001/0.01	0.1/5	0/0
Confections and Frostings	0/0	15/32.5	10/24	0.0001/0.01	0.3/10	0.03/1.5
Egg Products	0/0	0/0	0/0	0.0001/0.005	0.1/5	0/0
Fats and Oils	0.00001/0.002	0/0	0/0	0.001/0.1	0.1/5	0/0
Fish Products	0/0	0/0	0/0	0.0001/0.005	0.1/5	0/0
Frozen Dairy	0/0	15/32.5	10/24	0.0001/0.005	0.1/5	0/0
Fruit Ices	0/0	15/32.5	10/24	0.0001/0.005	0.1/5	0.03/1.5
Gelatins and Puddings	0/0	15/32.5	10/24	0.0001/0.005	0.1/5	0.03/1.5
Granulated Sugar	0/0	0/0	0/0	0/0	0/0	0/0
Gravies	0/0	0/0	0/0	0.0001/0.005	0.1/5	0/0
Hard Candy	0/0	15/32.5	10/24	0.0001/0.005	0.3/10	0.1/5
Imitation Dairy	0/0	15/32.5	10/24	0.0005/0.05	0.3/10	0/0
Instant Coffee and Tea	0.00001/0.002	15/32.5	10/24	0.00002/0.002	0.1/5	0.01/0.5
Jams and Jellies	0/0	15/32.5	10/24	0.0001/0.005	0.1/5	0.03/1.5
Meat Products	0/0	0/0	0/0	0.0001/0.005	0.1/5	0/0
Milk Products	0/0	15/32.5	10/24	0.0005/0.05	0.1/5	0/0
Nut Products	0.00001/0.002	15/32.5	10/24	0.0001/0.005	0.1/5	0/0
Other Grains	0/0	15/32.5	10/24	0.0001/0.005	0.1/5	0/0
Poultry	0/0	0/0	0/0	0.0001/0.005	0.1/5	0/0
Processed Fruits	0/0	15/32.5	10/24	0/0	0/0	0/0
Processed Vegetables	0/0	0/0	0/0	0/0	0/0	0/0
Reconstituted Vegetable Protein	0/0	0/0	0/0	0/0	0/0	0/0
Seasonings and Flavors	0/0	15/32.5	10/24	0.0001/0.005	0.1/5	0/0
Snack Foods	0/0	15/32.5	10/24	0.0001/0.005	0.3/10	0/0
Soft Candy	0/0	15/32.5	10/24	0.0001/0.01	0.3/10	0.03/1.5
Soups	0.00001/0.002	15/32.5	10/24	0.00002/0.002	0.1/5	0/0
Sugar Substitutes	0/0	0/0	0/0	0/0	0/0	0/0
Sweet Sauces	0/0	15/32.5	10/24	0.0001/0.005	0.1/5	0/0

Table 2. Average Usual Use Levels (ppm)/Average Maximum Use Levels (ppm) on which the FEMA Expert Panel based its judgments that the substances are generally recognized as safe (GRAS)

	4-Isopropoxycinnamaldehyde	Glucosylated steviol glycosides, 90%	Sodium Gluconate	Rebaudioside E ≥85%	Rebaudioside I 95%	beta-Bisabolene ≥88%	Nootkatone complex
Category/FEMA No.	4930	4931	4934	4936	4937	4940	4941
Baked Goods	0/0	100/100	2500/2500	30/45	20/30	10/50	0/0
Beverages, Non-Alcoholic	0.5/25	100/100	1500/2500	30/45	20/30	5/25	10/50
Beverages, Alcoholic	0.5/25	100/100	1500/2500	30/45	20/30	10/50	10/50
Breakfast Cereals	0/0	100/100	2500/2500	30/45	20/30	5/25	0/0
Cheeses	0/0	100/100	2500/2500	0/0	0/0	0/0	0/0
Chewing Gum	2/25	100/100	0/0	35/45	25/30	10/50	10/50
Condiments and Relishes	0/0	100/100	1500/2500	30/45	20/30	0/0	0/0
Confections and Frostings	0/0	100/100	1500/2500	30/45	20/30	10/50	10/50
Egg Products	0/0	0/0	1500/2500	0/0	0/0	0/0	0/0
Fats and Oils	0/0	100/100	0/0	0/0	0/0	5/25	0/0
Fish Products	0/0	0/0	1500/2500	0/0	0/0	0/0	0/0
Frozen Dairy	0/0	100/100	1500/2500	30/45	20/30	7/35	0/0
Fruit Ices	0/0	100/100	1500/2500	30/45	20/30	10/50	0/0
Gelatins and Puddings	0/0	100/100	0/0	30/45	20/30	5/25	0/0
Granulated Sugar	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Gravies	0/0	100/100	2500/2500	0/0	0/0	0/0	0/0
Hard Candy	0/0	100/100	0/0	30/45	20/30	10/50	0/0
Imitation Dairy	0/0	100/100	1500/2500	30/45	20/30	0/0	0/0
Instant Coffee and Tea	0.1/15	100/100	1500/2500	30/45	20/30	0/0	0/0
Jams and Jellies	0/0	100/100	1000/2500	30/45	20/30	5/25	0/0
Meat Products	0/0	0/0	2500/2500	0/0	0/0	0/0	0/0
Milk Products	0.2/15	100/100	0/0	30/45	20/30	0/0	0/0
Nut Products	0/0	100/100	2500/2500	30/45	20/30	0/0	0/0
Other Grains	0/0	100/100	0/0	30/45	20/30	0/0	0/0
Poultry	0/0	0/0	2500/2500	0/0	0/0	0/0	0/0
Processed Fruits	0/0	100/100	1500/2500	30/45	20/30	7/35	0/0
Processed Vegetables	0/0	100/100	2500/2500	0/0	0/0	0/0	0/0
Reconstituted Vegetable Protein	0/0	100/100	0/0	0/0	0/0	0/0	0/0
Seasonings and Flavors	0/0	100/100	2500/2500	30/45	20/30	0/0	0/0
Snack Foods	0.2/10	100/100	2500/2500	30/45	20/30	0/0	0/0
Soft Candy	0/0	100/100	0/0	30/45	20/30	10/50	0/0
Soups	0/0	100/100	2500/2500	30/45	20/30	0/0	0/0
Sugar Substitutes	1/25	0/0	1500/2500	0/0	20/30	0/0	0/0
Sweet Sauces	0/0	100/100	1500/2500	30/45	20/30	5/25	0/0

Table 3. Identity for Natural Flavor Complexes as Evaluated by the FEMA Expert Panel

FEMA No.	FEMA Primary Name	The Identification Value as Reviewed by the FEMA Expert Panel
4895	Rebaudioside M	Rebaudioside M \geq 80%; Rebaudioside D 5-20%; Total steviol glycosides \geq 95%.
4909	Glucosylated steviol glycosides, 70-80%	Supraglucosylated steviol glycosides 70-80%; Rebaudioside A 14-20%; Steviol glycosides not further glucosylated not to individually exceed 1% each; Maltodextrin 3-10%
4910	Glucosylated steviol glycosides, 40%	Supraglycosylated steviol glycosides 30-40%; Rebaudioside A 5-8%; stevioside no more than 4%; other individual steviol glycosides not further glucosylated less than 3%; maltodextrin, 45-60%
4921	Rebaudioside D, 95%	Rebaudioside D \geq 95%; Total other steviol glycosides <3.5%
4922	Rebaudioside M, 95%	Rebaudioside M \geq 95%; Rebaudioside B <2%; Rebaudioside A <1.5%; Total other steviol glycosides <1.5%
4931	Glucosylated steviol glycosides, 90%	Not less than 90% of total steviol glycosides inclusive of supraglucosylated steviol glycosides; Rebaudioside A less than 3%; Stevioside less than 2%; other individual steviol glycosides not further glucosylated each less than 2%; Maltodextrin less than 10%
4936	Rebaudioside E \geq85%	Rebaudioside E 85-92%; Rebaudioside D 5-10%; Steviobioside and stevioside, each individually less than 1%
4937	Rebaudioside I 95%	Rebaudioside I \geq 95%; Rebaudioside B <1%
4940	<i>beta</i>-Bisabolene \geq88%	Not less than 88% <i>beta</i> -bisabolene; Not less than 7% terpene hydrocarbons
4941	Nootkatone complex	Not less than 75% alicyclic ketones, secondary alcohols and related esters typically identified as nootkatone