

# GRAS Flavoring Substances 29

**29. GRAS Flavoring Substances.** This list of substances will appear in the 29<sup>th</sup> 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.

## **FEMA EXPERT PANEL**

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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 nitrate (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	<b>2-(4-Ethylphenoxy)-N-(1H-pyrazol-3-yl)-N-(thiophen-2-ylmethyl)acetamide</b> 2-(4-Ethylphenoxy)-N-(1H-pyrazol-5-yl)-N-(thiophen-2-ylmethyl)acetamide
4881	<b>N-(3-Hydroxy-4-methoxyphenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide</b>
4882	<b>N-(4-(Cyanomethyl)phenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide</b>
4884	<b>6-Methyl-5-hepten-2-ol</b> (+/-)-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	<b>3-p-Menthen-7-al</b>
4891	<b>(E)-3-Methyl-4-dodecenoic acid</b>
4892	<b>cis-2-Hexylcyclopropaneacetic acid</b>
4895	<b>Rebaudioside M</b>
4896	<b>N-(2-Hydroxy-2-phenylethyl)-2-isopropyl-5,5-dimethylcyclohexane-1-carboxamide</b>
4897	<b>Allulose</b> D- Psicose
4898	<b>trans-5-Octenal</b>
4899	<b>N-(1-((4-amino-2,2-dioxido-1H-benzo[c][1,2,6]thiadiazin-5-yl)oxy)-2-methylpropan-2-yl)-2,6-dimethylisonicotinamide</b>
4901	<b>O-ethyl S-(3-methylbut-2-en-1-yl)thiocarbonate</b> Carbonothioic acid, O-ethyl S-(3-methyl-2-buten-1-yl) ester
4903	<b>Ethyl 3-methyl-2-oxopentanoate</b>
4909	<b>Glucosylated steviol glycosides, 70-80%</b>
4914	<b>bis-(3-Methyl-2-butenyl)disulfide</b> bi(3-Methyl-2-buten-1-yl) disulfide
4915	<b>(5Z)-3,4-Dimethyl-5-propylidene-2(5H)-furanone</b>
4916	<b>2-Methyl-3-butene-2-thiol</b> $\alpha,\alpha$ -Dimethyl allyl mercaptan
4917	<b>(Z)-9-Dodecenoic acid</b> (9Z)-9-Dodecenoic acid 9-Dodecenoic acid, (Z)- cis-9-Dodecenoic acid Lauroleic acid
4920	<b>1-Ethyl-2-(1-pyrrolylmethyl)pyrrole</b>
4921	<b>Rebaudioside D, 95%</b>
4922	<b>Rebaudioside M, 95%</b>
4926	<b>(Z)-8-Pentadecenal</b>
4928	<b>2-Methylthiophene</b>
4929	<b>4-Methylidene-2-(2-methylprop-1-enyl)oxane</b>
4930	<b>4-Isopropoxycinnamaldehyde</b>
4931	<b>Glucosylated steviol glycosides, 90%</b>
4934	<b>Sodium Gluconate</b>
4936	<b>Rebaudioside E <math>\geq</math>85%</b>
4937	<b>Rebaudioside I 95%</b>
4940	<b>beta-Bisabolene <math>\geq</math>88%</b>
4941	<b>Nootkatone Complex</b>

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-yl)methylacetamide	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	( <i>E</i> )-3-Methyl-4-dodecenoic acid
Category/FEMA No.	4880	4881	4882	4884	4890	4891
Baked Goods	3/15	0/0	0/0	10/50	0.001/0.01	0.1/1
Beverages, Non-Alcoholic	1/3	0.1/10	0.1/10	5/25	0.0003/0.005	0.001/0.1
Beverages, Alcoholic	2/6	0.1/10	0.1/10	10/50	0.0003/0.005	0.001/0.1
Breakfast Cereals	3/15	0/0	0/0	5/25	0/0	0/0
Cheeses	0/0	0/0	0/0	7/35	0.001/0.01	0/0
Chewing Gum	75/150	1/100	1/100	0/0	0.001/0.01	0.001/0.1
Condiments and Relishes	3/15	0.1/10	0.1/10	5/25	0.01/0.1	0/0
Confections and Frostings	5/30	1/100	1/100	10/50	0.001/0.01	0.001/0.3
Egg Products	3/15	0/0	0/0	0/0	0/0	0.001/0.3
Fats and Oils	3/15	0.05/5	0.05/5	5/25	0.01/0.1	0.01/0.1
Fish Products	0/0	0/0	0/0	2/10	0/0	0.001/0.3
Frozen Dairy	1/3	0.1/10	0.1/10	0/0	0.001/0.01	0.001/0.2
Fruit Ices	1/3	0.1/10	0.1/10	10/50	0.0005/0.01	0.001/0.2
Gelatins and Puddings	1/3	0.05/5	0.05/5	0/0	0.0005/0.01	0.01/0.1
Granulated Sugar	0/0	0/0	0/0	0/0	0/0	0/0
Gravies	3/15	0.05/5	0.05/5	5/25	0/0	0.001/0.05
Hard Candy	5/15	0.1/10	0.1/10	0/0	0.001/0.01	0.001/0.3
Imitation Dairy	1/3	0.05/5	0.05/5	7/35	0/0	0.0001/0.05
Instant Coffee and Tea	1/3	0.01/1	0.01/1	5/25	0/0	0.0001/0.1
Jams and Jellies	1/3	0.1/10	0.1/10	20/100	0.0005/0.01	0/0
Meat Products	3/15	0/0	0/0	2/10	0.001/0.01	0/0
Milk Products	1/3	0.05/5	0.05/5	7/35	0/0	0.001/0.05
Nut Products	1/3	0/0	0/0	0/0	0/0	0.001/0.05
Other Grains	0/0	0/0	0/0	5/25	0/0	0/0
Poultry	3/15	0/0	0/0	2/10	0/0	0/0
Processed Fruits	1/3	0/0	0/0	7/35	0/0	0/0
Processed Vegetables	3/15	0/0	0/0	0/0	0/0	0/0
Reconstituted Vegetables	3/15	0/0	0/0	0/0	0/0	0/0
Seasonings and Flavors	3/15	3/900	3/900	5/25	0.05/0.3	0.01/2
Snack Foods	3/15	0.1/10	0.1/10	10/50	0.003/0.1	0.001/0.3
Soft Candy	5/15	0.1/10	0.1/10	0/0	0.001/0.01	0.001/0.3
Soups	3/15	0.1/10	0.1/10	5/25	0.0005/0.01	0.0001/0.3
Sugar Substitutes	0/0	0.005/0.5	0.005/0.5	0/0	0/0	0.001/0.05
Sweet Sauces	5/15	0.5/50	0.5/50	5/25	0.001/0.01	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>cis</i> -2-Hexylcyclopropaneacetic acid	Rebaudioside M	<i>N</i> -(2-Hydroxy-2-phenylethyl)-2-isopropyl-5,5-dimethylcyclohexane-1-carboxamide	Allulose	<i>trans</i> -5-Octenal
Category/FEMA No.	4892	4895	4896	4897	4898
Baked Goods	0.001/0.01	0/0	0/0	0/0	5/50
Beverages, Non-Alcoholic	0.0002/0.005	15/20	1/100	15000/20000	2.5/25
Beverages, Alcoholic	0.0002/0.005	0/0	1/100	0/0	2.5/25
Breakfast Cereals	0/0	0/0	0/0	0/0	10/100
Cheeses	0/0	0/0	0/0	0/0	0/0
Chewing Gum	0.001/0.01	0/0	10/1000	0/0	50/250
Condiments and Relishes	0.001/0.01	0/0	1/100	0/0	0/0
Confections and Frostings	0.0005/0.005	0/0	10/1000	0/0	5/50
Egg Products	0.0005/0.005	0/0	0/0	0/0	0/0
Fats and Oils	0.01/0.1	0/0	0.5/50	0/0	3/30
Fish Products	0.001/0.01	0/0	0/0	0/0	3/30
Frozen Dairy	0.001/0.01	15/20	1/100	0/0	5/50
Fruit Ices	0.0005/0.005	15/20	1/100	0/0	5/50
Gelatins and Puddings	0.0005/0.005	0/0	0.5/50	0/0	10/100
Granulated Sugar	0/0	0/0	0/0	0/0	0/0
Gravies	0/0	0/0	0.5/50	0/0	0.5/5
Hard Candy	0.001/0.01	0/0	1/100	0/0	10/50
Imitation Dairy	0.001/0.01	15/20	0.5/50	0/0	3/30
Instant Coffee and Tea	0.0002/0.005	15/20	0.1/10	0/0	5/50
Jams and Jellies	0.0005/0.005	0/0	1/100	0/0	5/50
Meat Products	0/0	0/0	0/0	0/0	0/0
Milk Products	0.001/0.01	15/20	0.5/50	0/0	3/30
Nut Products	0.001/0.01	0/0	0/0	0/0	3/30
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	15/20	0/0	0/0	0/0
Processed Vegetables	0/0	0/0	0/0	0/0	0/0
Reconstituted Vegetables	0/0	0/0	0/0	0/0	0/0
Seasonings and Flavors	0.01/0.2	0/0	30/9000	0/0	0/0
Snack Foods	0.001/0.01	0/0	1/100	0/0	15/150
Soft Candy	0.001/0.01	0/0	1/100	0/0	10/100
Soups	0.0002/0.005	0/0	1/100	0/0	0.5/5
Sugar Substitutes	0/0	0/0	0.05/5	0/0	0/0
Sweet Sauces	0.001/0.01	0/0	5/500	0/0	10/100

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>N</i> -(1-(4-amino-2,2-dioxido-1 <i>H</i> -benzo[ <i>c</i> ]1,2,6thiadiazin-5-yl)oxy)-2-methylpropan-2-yl)-2,6-dimethylisonicotinamide	<i>O</i> -ethyl- <i>S</i> -(3-methylbut-2-en-1-yl)thiocarbonate	Ethyl 3-methyl-2-oxopentanoate	Glucosylated steviol glycosides, 70-80%	<i>bis</i> -(3-Methyl-2-butenyl)disulfide	(5 <i>Z</i> )-3,4-Dimethyl-5-propylidene-2(5 <i>H</i> )-furanone
Category/FEMA No.	4899	4901	4903	4909	4914	4915
Baked Goods	0/0	0/0	10/100	0/0	0.1/1	0/0
Beverages, Non-Alcoholic	15/15	0.0001/0.003	5/50	55/65	0.005/0.05	0.01/0.1
Beverages, Alcoholic	0/0	0.0002/0.006	2.5/25	0/0	0.005/0.05	0.01/0.1
Breakfast Cereals	0/0	0.005/0.015	5/50	0/0	0.1/1	0/0
Cheeses	0/0	0/0	0/0	0/0	0.1/1	0/0
Chewing Gum	0/0	0/0	10/100	0/0	0.1/1	0/0
Condiments and Relishes	0/0	0/0	0/0	0/0	0.1/1	0.1/1
Confections and Frostings	0/0	0.005/0.015	5/50	0/0	0.1/1	0/0
Egg Products	0/0	0/0	0/0	0/0	0.1/1	0/0
Fats and Oils	0/0	0/0	5/50	0/0	0.1/1	0/0
Fish Products	0/0	0/0	0/0	0/0	0.1/1	0/0
Frozen Dairy	0/0	0.005/0.015	5/50	55/65	0.1/1	0/0
Fruit Ices	0/0	0/0	5/50	0/0	0.1/1	0.001/0.01
Gelatins and Puddings	0/0	0.005/0.015	5/50	0/0	0.1/1	0.001/0.01
Granulated Sugar	0/0	0/0	0/0	0/0	0.1/1	0/0
Gravies	0/0	0/0	0/0	0/0	0.1/1	0/0
Hard Candy	0/0	0.005/0.015	10/100	0/0	0.1/1	0.1/5
Imitation Dairy	6/15	0.0001/0.003	2.5/25	55/65	0.1/1	0/0
Instant Coffee and Tea	6/15	0.0001/0.003	5/50	55/65	0.1/1	0.01/0.1
Jams and Jellies	0/0	0.005/0.015	2.5/25	0/0	0.1/1	0/0
Meat Products	0/0	0/0	0/0	0/0	0.1/1	0/0
Milk Products	6/15	0.0001/0.003	2.5/25	55/65	0.1/1	0.01/0.1
Nut Products	0/0	0.005/0.015	5/50	0/0	0.1/1	0/0
Other Grains	0/0	0/0	5/50	0/0	0.1/1	0/0
Poultry	0/0	0/0	0/0	0/0	0.1/1	0/0
Processed Fruits	0/0	0/0	0/0	0/0	0.1/1	0/0
Processed Vegetables	0/0	0/0	0/0	0/0	0.1/1	0/0
Reconstituted Vegetables	0/0	00	0/0	0/0	0.1/1	0/0
Seasonings and Flavors	0/0	0/0	10/100	0/0	0.1/1	0.01/0.1
Snack Foods	0/0	0.005/0.015	2.5/25	0/0	0.1/1	0.01/0.1
Soft Candy	0/0	0.005/0.015	5/50	0/0	0.1/1	0/0
Soups	0/0	0/0	2.5/25	0/0	0.1/1	0/0
Sugar Substitutes	0/0	0/0	0/0	0/0	0.1/1	0/0
Sweet Sauces	0/0	0.005/0.015	2.5/25	0/0	0.1/1	0.1/5

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-Methyl-3-butene-2-thiol	(Z)-9-Dodecenoic acid	1-Ethyl-2-(1-pyrrolylmethyl)pyrrole	Rebaudioside D, 95%	Rebaudioside M, 95%	(Z)-8-Pentadecenal
Category/FEMA No.	4916	4917	4920	4921	4922	4926
Baked Goods	0.001/0.05	1/10	0.00001/0.002	15/32.5	10/24	0.001/0.1
Beverages, Non-Alcoholic	0.0001/0.002	0.02/0.2	0.00001/0.002	15/32.5	10/24	0.00002/0.002
Beverages, Alcoholic	0.0001/0.002	0.02/0.2	0.00001/0.002	15/32.5	10/24	0.00002/0.002
Breakfast Cereals	0/0	0.05/5	0/0	15/32.5	10/24	0.0001/0.005
Cheeses	0.0005/0.005	0.2/2	0/0	0/0	0/0	0.0002/0.02
Chewing Gum	0.001/0.02	0.1/1	0/0	200/325	10/240	0.0001/0.01
Condiments and Relishes	0.001/0.01	0.1/1	0.00001/0.002	15/32.5	10/24	0.0001/0.01
Confections and Frostings	0.0005/0.005	0.1/1	0/0	15/32.5	10/24	0.0001/0.01
Egg Products	0.0002/0.002	0.05/0.5	0/0	0/0	0/0	0.0001/0.005
Fats and Oils	0/0	0.5/5	0.00001/0.002	0/0	0/0	0.001/0.1
Fish Products	0/0	0.05/0.5	0/0	0/0	0/0	0.0001/0.005
Frozen Dairy	0.0002/0.003	0.05/0.5	0/0	15/32.5	10/24	0.0001/0.005
Fruit Ices	0.0002/0.003	0.05/0.5	0/0	15/32.5	10/24	0.0001/0.005
Gelatins and Puddings	0.0002/0.003	0.05/0.5	0/0	15/32.5	10/24	0.0001/0.005
Granulated Sugar	0/0	0/0	0/0	0/0	0/0	0/0
Gravies	0.001/0.01	0.05/0.5	0/0	0/0	0/0	0.0001/0.005
Hard Candy	0.001/0.01	0.05/0.5	0/0	15/32.5	10/24	0.0001/0.005
Imitation Dairy	0/0	0.5/5	0/0	15/32.5	10/24	0.0005/0.05
Instant Coffee and Tea	0.0003/0.005	0.02/0.2	0.00001/0.002	15/32.5	10/24	0.00002/0.002
Jams and Jellies	0/0	0.05/0.5	0/0	15/32.5	10/24	0.0001/0.005
Meat Products	0.001/0.01	0.05/0.5	0/0	0/0	0/0	0.0001/0.005
Milk Products	0.0001/0.002	0.5/5	0/0	15/32.5	10/24	0.0005/0.05
Nut Products	0/0	0.05/0.5	0.00001/0.002	15/32.5	10/24	0.0001/0.005
Other Grains	0/0	0.05/0.5	0/0	15/32.5	10/24	0.0001/0.005
Poultry	0/0	0.05/0.5	0/0	0/0	0/0	0.0001/0.005
Processed Fruits	0/0	0/0	0/0	15/32.5	10/24	0/0
Processed Vegetables	0/0	0/0	0/0	0/0	0/0	0/0
Reconstituted Vegetables	0/0	0/0	0/0	0/0	0/0	0/0
Seasonings and Flavors	0.1/1	0.05/0.5	0/0	15/32.5	10/24	0.0001/0.005
Snack Foods	0.005/0.1	0.05/0.5	0/0	15/32.5	10/24	0.0001/0.005
Soft Candy	0.001/0.01	0.10/1	0/0	15/32.5	10/24	0.0001/0.01
Soups	0.003/0.005	0.02/0.2	0.00001/0.002	15/32.5	10/24	0.00002/0.002
Sugar Substitutes	0/0	0/0	0/0	0/0	0/0	0/0
Sweet Sauces	0.001/0.01	0.05/2	0/0	15/32.5	10/24	0.0001/0.005

**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-Methylthiophene	4-Methylidene-2-(2-methylprop-1-enyl)oxane	4-Isopropoxycinnamaldehyde	Glucosylated steviol glycosides, 90%	Sodium Gluconate	Rebaudioside E ≥85%	Rebaudioside I 95%	beta-Bisabolene ≥88%
Category/FEMA No.	4928	4929	4930	4931	4934	4936	4937	4940
Baked Goods	0.3/10	0/0	0/0	100/100	2500/2500	30/45	20/30	10/50
Beverages, Non-Alcoholic	0.1/5	0.01/0.5	0.5/25	100/100	1500/2500	30/45	20/30	5/25
Beverages, Alcoholic	0.1/5	0.01/0.5	0.5/25	100/100	1500/2500	30/45	20/30	10/50
Breakfast Cereals	0.3/10	0.1/5	0/0	100/100	2500/2500	30/45	20/30	5/25
Cheeses	0.1/5	0/0	0/0	100/100	2500/2500	0/0	0/0	0/0
Chewing Gum	0.1/5	0.03/1.5	2/25	100/100	0/0	35/45	25/30	10/50
Condiments and Relishes	0.1/5	0/0	0/0	100/100	1500/2500	30/45	20/30	0/0
Confections and Frostings	0.3/10	0.03/1.5	0/0	100/100	1500/2500	30/45	20/30	10/50
Egg Products	0.1/5	0/0	0/0	0/0	1500/2500	0/0	0/0	0/0
Fats and Oils	0.1/5	0/0	0/0	100/100	0/0	0/0	0/0	5/25
Fish Products	0.1/5	0/0	0/0	0/0	1500/2500	0/0	0/0	0/0
Frozen Dairy	0.1/5	0/0	0/0	100/100	1500/2500	30/45	20/30	7/35
Fruit Ices	0.1/5	0.03/1.5	0/0	100/100	1500/2500	30/45	20/30	10/50
Gelatins and Puddings	0.1/5	0.03/1.5	0/0	100/100	0/0	30/45	20/30	5/25
Granulated Sugar	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Gravies	0.1/5	0/0	0/0	100/100	2500/2500	0/0	0/0	0/0
Hard Candy	0.3/10	0.1/5	0/0	100/100	0/0	30/45	20/30	10/50
Imitation Dairy	0.3/10	0/0	0/0	100/100	1500/2500	30/45	20/30	0/0
Instant Coffee and Tea	0.1/5	0.01/0.5	0.1/15	100/100	1500/2500	30/45	20/30	0/0
Jams and Jellies	0.1/5	0.03/1.5	0/0	100/100	1000/2500	30/45	20/30	5/25
Meat Products	0.1/5	0/0	0/0	0/0	2500/2500	0/0	0/0	0/0
Milk Products	0.1/5	0/0	0.2/15	100/100	0/0	30/45	20/30	0/0
Nut Products	0.1/5	0/0	0/0	100/100	2500/2500	30/45	20/30	0/0
Other Grains	0.1/5	0/0	0/0	100/100	0/0	30/45	20/30	0/0
Poultry	0.1/5	0/0	0/0	0/0	2500/2500	0/0	0/0	0/0
Processed Fruits	0/0	0/0	0/0	100/100	1500/2500	30/45	20/30	7/35
Processed Vegetables	0/0	0/0	0/0	100/100	2500/2500	0/0	0/0	0/0
Reconstituted Vegetables	0/0	0/0	0/0	100/100	0/0	0/0	0/0	0/0
Seasonings and Flavors	0.1/5	0/0	0/0	100/100	2500/2500	30/45	20/30	0/0
Snack Foods	0.3/10	0/0	0.2/10	100/100	2500/2500	30/45	20/30	0/0
Soft Candy	0.3/10	0.03/1.5	0/0	100/100	0/0	30/45	20/30	10/50
Soups	0.1/5	0/0	0/0	100/100	2500/2500	30/45	20/30	0/0
Sugar Substitutes	0/0	0/0	1/25	0/0	1500/2500	0/0	20/30	0/0
Sweet Sauces	0.1/5	0/0	0/0	100/100	1500/2500	30/45	20/30	5/25



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)

	Nootkatone complex
<b>Category/FEMA No.</b>	<b>4941</b>
Baked Goods	0/0
Beverages, Non-Alcoholic	10/50
Beverages, Alcoholic	10/50
Breakfast Cereals	0/0
Cheeses	0/0
Chewing Gum	10/50
Condiments and Relishes	0/0
Confections and Frostings	10/50
Egg Products	0/0
Fats and Oils	0/0
Fish Products	0/0
Frozen Dairy	0/0
Fruit Ices	0/0
Gelatins and Puddings	0/0
Granulated Sugar	0/0
Gravies	0/0
Hard Candy	0/0
Imitation Dairy	0/0
Instant Coffee and Tea	0/0
Jams and Jellies	0/0
Meat Products	0/0
Milk Products	0/0
Nut Products	0/0
Other Grains	0/0
Poultry	0/0
Processed Fruits	0/0
Processed Vegetables	0/0
Reconstituted Vegetables	0/0
Seasonings and Flavors	0/0
Snack Foods	0/0
Soft Candy	0/0
Soups	0/0
Sugar Substitutes	0/0
Sweet Sauces	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	<b>Rebaudioside M</b>	Rebaudioside M $\geq$ 80%; Rebaudioside D 5-20%; Total steviol glycosides $\geq$ 95%.
4909	<b>Glucosylated steviol glycosides, 70-80%</b>	Supraglucosylated steviol glycosides 70-80%; Rebaudioside A 14-20%; Steviol glycosides not further glucosylated not to individually exceed 1% each; Maltodextrin 3-10%
4921	<b>Rebaudioside D, 95%</b>	Rebaudioside D $\geq$ 95%; Total other steviol glycosides <3.5%
4922	<b>Rebaudioside M, 95%</b>	Rebaudioside M $\geq$ 95%; Rebaudioside B <2%; Rebaudioside A <1.5%; Total other steviol glycosides <1.5%
4931	<b>Glucosylated steviol glycosides, 90%</b>	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	<b>Rebaudioside E <math>\geq</math>85%</b>	Rebaudioside E 85-92%; Rebaudioside D 5-10%; Steviobioside and stevioside, each individually less than 1%
4937	<b>Rebaudioside I 95%</b>	Rebaudioside I $\geq$ 95%; Rebaudioside B <1%
4940	<b><i>beta</i>-Bisabolene <math>\geq</math>88%</b>	Not less than 88% <i>beta</i> -bisabolene; Not less than 7% terpene hydrocarbons
4941	<b>Nootkatone complex</b>	Not less than 75% alicyclic ketones, secondary alcohols and related esters typically identified as nootkatone