> Natural Flavoring Substances

> Synthetics & Natural Identical Flavoring Substances





Flavoring substances and flavoring essences are used to produce, change or enhance flavor of foods. Usually flavoring substances are made to flavoring essences and used to enhance flavor of foods; some flavoring substances could be directly used to enhance flavor of foods. The flavoring substances and flavoring essences do not include substances that only produce the taste of sweet, sour or salty, nor do they include flavor enhancers.

- USDA Foreign Agricultural Service



GB2760-2014 CHINESE STANDARDS FOR FOOD ADDITIVES

Principles

- a) Not to harm human health in any form.
- b) Not to cover up putrefied and deteriorated foods.
- c) Not to conceal quality defects or for the purpose of adulteration and counterfeiting.
- d) Not to reduce the nutrition value of food.
- e) To reduce the level of use in foods as much as possible on the precondition of reaching anticipated results.
- f) Food processing aids should generally be removed before the finished products are produced, unless a residue level is specified in the food product.



FOOD USE FLAVORING CHEMICALS

Food use flavoring substances are identified as **Natural Flavoring Substances** and **Synthetic Flavoring Substances** (include the **natural identical**). They could be added shall follow provisions of relevant food product standards of each countries.

Food use flavoring formulations could contain **flavoring essences** that are necessary for the production, storage and use. The ingredients permitted in the flavoring essences shall comply with provisions of relevant standards, and the few ingredients be used, the better. The food additives used in flavoring essences shall not function in the final food products



Food Use Flavoring Substance	es								
Chemicals Name	CAS	FEMA	FL No.	GRAS	GB.CODE	GB.LIST	STATE	TYPE	SENSE
[alpha]-Phellandrene	99-83-2	2856	01.006	172.515	S0668	B.3	L	NI, S	Citrus, Pepper
[alpha]-Pinene	80-56-8	2902	01.004	172.515 175.300 175.320	S0658	B.3	L	NI, S	Citrus, Spicy
[alpha]-Terpinene	99-86-5	3558	01.019	172.515	S0680	B.3	L	NI, S	Citrus
[alpha]-Terpineol	98-55-5	3045	02.014	172.515 178.1010	S0037	B.3	L	NI, S	Floral, Fruity
[beta]-Pinene	127-91-3	2903	01.003	172.515 175.300 175.320	S0659	B.3	L	NI, S	Citrus, Spicy
[delta]-Carene	13466-78-9	3821	01.029	-	S0681	B.3	L	NI, S	Citrus
[gamma]-Ethyl Guaiacol	2785-89-9	2436	04.008	172.515	S0105	B.3	L	NI, S	Green, Spicy
[gamma]-Terpinene	99-85-4	3559	01.020	172.515	S0670	B.3	L	NI, S	Citrus

CATEGORY

FL No.: Is the registered number listed in EU Regulation 2232/96. GRAS is listed in FDA Regulations 21 CFR. GB.CODE: Is the registered number listed in CN Standard for Food Additives (GB.2760-2014)

GB.LIST: B.2 is the permitted food use natural flavoring substances. B.3 is the permitted food use synthetic flavoring substances (includes natural identical flavoring).

STATE: C=crystal, L=liquid, P=powder, S=solid





Food Use Flavoring Substance	s								
Chemicals Name	CAS	FEMA	FL No.	GRAS	GB.CODE	GB.LIST	STATE	TYPE	SENSE
<u>1,4-Cineole</u>	470-67-7	3658	03.007	172.515	S0661	B.3	L	NI, S	Spicy
1,8-Cineole	470-82-6	2465	03.001	172.515	S0660	B.3	L	NI, S	Green
4-Ethylgualacol	2785-89-9	2436	04.008	172.515	S0105	B.3	L	NI, S	Juicy, Soy
Benzaldehyde	100-52-7	2127	05.013	182.60	S0165	B.3	L	NI, S	Sweety, Almond
Bornyl Acetate	76-49-3	2159	09.017	172.515	S0385	B.3	L	NI, S	Woody, Spice
<u>Camphene</u>	79-92-5	2229	01.009	172.515	S0657	B.3	С	NI, S	Herbal, Spicy
Camphor oil (<i>C.camphora</i>)	76-22-2	2231	-	-	N165	B.2	L	NE	Spicy, Fresh
Carvacrol	499-75-2	2245	04.031	172.515	S0111	B.3	L	NI, S	Floral, Thyme

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Food Additives Could Be Applied In The Following Cases

- a) To keep or improve the nutrition value of food itself.
- b) To serve as essential ingredients or components in some special dietary foods.
- c) To improve the quality and stability of food, as well as its sensory properties.
- d) To facilitate production, processing, packaging, transport or storage of foods.



Food Use Flavoring Substance	es								
Chemicals Name	CAS	FEMA	FL No.	GRAS	GB.CODE	GB.LIST	STATE	TYPE	SENSE
Cassia Oil (<i>C.cassia</i>)	8007-80-5	2258	-	182.20	N039	B.2	L	NE	Spicy, Cinnamon
Cedarwood Oil Terpenes	68608-32-2	-	-	172.515	N321	B.2	L	NE	Woody, Green
Cedryl Acetate	77-54-3	-	09.171	-	S1197	B.3	C, L	S	Woody
Cinnamic Alcohol	104-54-1	2294	02.017	172.515	S0042	B.3	С	NI, S	Sweety, Fruity
Cinnamic Aldehyde	104-55-2	2286	05.014	182.60	S0176	B.3	L	NI, S	Fresh, Green
Cinnamon Bark Oil (<i>C.spp</i>)	8007-80-5	2290	-	182.20	N364	B.2	L	NE	Spicy, Cinnamon
Cinnamon leaf oil (<i>C.spp</i>)	8007-80-5	2292	-	182.20	N117	B.2	L	NE	Spicy, Cinnamon
Citronella Oil (<i>C.nardus</i>)	8000-29-1	2308	-	182.20	N190	B.2	L	NE	Fruity, Fresh

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Chemicals Name	CAS	FEMA	FL No.	GRAS	GB.CODE	GB.LIST	STATE	TYPE	SENSE
Citronellal	106-23-0	2307	05.021	172.515	S0173	B.3	L	NI, S	Fruity, Citrus
<i>d</i> -Camphor	464-49-3	2230	07.215	172.515	N220	B.2	С	NE	Spicy
<i>d</i> -Fenchone	4695-62-9	2479	07.159	172.515	S0274	B.3	L	NI, S	Spicy
<u>d-Limonene</u>	5989-27-5	2633	01.045	182.60	S0654	B.3	L	NI, S	Fruity, Citrus
Eucalyptus Oil	8000-48-4	2466	-	172.510	N114	B.2	L	NE	Green
Eugenol	97-53-0	2467	04.003	177.2800 184.1257	S0091	B.3	L	NI, S	Spicy, Sweety
Fenchyl Alcohol	1632-73-1	2480	02.038	172.515	S0026	B.3	L	S	Floral
Glycerol Ester of Rosin	8050-31-5	4226	-	175.105 175.300	S1358	B.3	S	S	None

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Carry-Over Of Principles

- a) The additive is acceptable for use in the food ingredients according to this standard.
- b) The amount of the additive in the ingredients does not exceed the maximum use level specified in this standard.
- c) The food additive shall be used under proper technological conditions, and the quantity of the ingredient in the food shall not be greater than would be introduced by the use of ingredients.
- d) The quantity of the additive carried over by the ingredients shall be much lower than the required level by directly adding the food additive into the food.







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Chemicals Name	CAS	FEMA	FL No.	GRAS	GB.CODE	GB.LIST	STATE	TYPE	SENSE
Guaiacol	90-05-1	2245	04.031	172.515	S0111	B.3	C, L	NI, S	Meat
Isoborneol	10385-78-1	2158	02.059	-	S0864	B.3	С	NI, S	Spice, Camphor
<u>Linalool</u>	78-70-6	2635	02.013	182.60	S0029	B.3	L	NI, S	Floral
<u>/Limonene</u>	5989-54-8	2633	01.046	182.60	S1105	B.3	L	NI, S	Fruity, Citrys
Methyl Dihydrojasmonate	24851-98-7	3408	09.520	-	S0511	B.3	L	S	Fruity
<u>Myrtenol</u>	515-00-4	3439	02.091	-	S0840	B.3	L	NI, S	Floral, Lavender
<u>Ocimene</u>	13877-91-3	3539	01.018	172.515	S0656	B.3	L	NI, S	Floral, Green
p-Cymene	99-87-6	2356	01.002	172.515	S0674	B.3	L	NI, S	Citrus

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<u>Perillaldehyde</u>	2111-75-3	3557	05.117	172.515	S0178	B.3	L	NI, S	Fresh, Floral
Pine Tar Oil (<i>P.spp</i>)	8011-48-1	2907	-	-	N352	B.2	L	NE	Woody, Spice
Rose Oxide	16409-43-1	3236	13.037	-	S0707	B.3	L	NI, S	Floral
Tea Tree Oil (<i>M.alternifolia</i>)	68647-73-4	3902	-	-	N261	B.2	L	NE	Green, Spicy
<u>Terpinolene</u>	586-62-9	3046	01.005	172.515	S0655	B.3	L	NI, S	Woody, Spice
Terpinyl Acetate	8007-35-0	3047	09.830	-	S0394	B.3	L	NI, S	Citrus, Fruity
<u>Vanillin</u>	121-33-5	3107	05.018	182.60 182.90	S0172	B.3	С	NI, S	Milk

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Food Additive Listings

- GB2760-2014 Database CFSA (CN)
- EU Lists for Flavourings EFSA
- Substances Added to Food (formerly EAFUS)- FDA

Foreverest Resources Ltd. is a family-owned company, which specializes in pine chemicals and provides reliable and comprehensive solutions for pre-sale & after-sale services. With 30 years of history in R&D of forest chemicals products in China, we focus on supplying the substitutes of natural products. Our products include modified resins, terpene based derivatives, flavour & fragrance ingredients, and other biobased chemicals.

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