

[42 FR 14491, Mar. 15, 1977, as amended at 43 FR 14644, Apr. 7, 1978; 49 FR 10104, Mar. 19, 1984; 54 FR 24897, June 12, 1989; 69 FR 24511, May 4, 2004; 72 FR 10357, Mar. 8, 2007]

§ 172.515 Synthetic flavoring substances and adjuvants.

Synthetic flavoring substances and adjuvants may be safely used in food in accordance with the following conditions.

(a) They are used in the minimum quantity required to produce their intended effect, and otherwise in accordance with all the principles of good manufacturing practice.

(b) They consist of one or more of the following, used alone or in combination with flavoring substances and adjuvants generally recognized as safe in food, prior-sanctioned for such use, or regulated by an appropriate section in this part.

Acetal; acetaldehyde diethyl acetal.
 Acetaldehyde phenethyl propyl acetal.
 Acetanisole; 4'-methoxyacetophenone.
 Acetophenone; methyl phenyl ketone.
 Allyl anthranilate.
 Allyl butyrate.
 Allyl cinnamate.
 Allyl cyclohexaneacetate.
 Allyl cyclohexanebutyrate.
 Allyl cyclohexanehexanoate.
 Allyl cyclohexanepropionate.
 Allyl cyclohexanevalerate.
 Allyl disulfide.
 Allyl 2-ethylbutyrate.
 Allyl hexanoate; allyl caproate.
 Allyl α -ionone; 1-(2,6,6-trimethyl-2-cyclohexene-1-yl)-1,6-heptadiene-3-one.
 Allyl isothiocyanate; mustard oil.
 Allyl isovalerate.
 Allyl mercaptan; 2-propene-1-thiol.
 Allyl nonanoate.
 Allyl octanoate.
 Allyl phenoxyacetate.
 Allyl phenylacetate.
 Allyl propionate.
 Allyl sorbate; allyl 2,4-hexadienoate.
 Allyl sulfide.
 Allyl tiglate; allyl *trans*-2-methyl-2-butenate.
 Allyl 10-undecenoate.
 Ammonium isovalerate.
 Ammonium sulfide.
 Amyl alcohol; pentyl alcohol.
 Amyl butyrate.
 α -Amylcinnamaldehyde.
 α -Amylcinnamaldehyde dimethyl acetal.
 α -Amylcinnamyl acetate.
 α -Amylcinnamyl alcohol.
 α -Amylcinnamyl formate.
 α -Amylcinnamyl isovalerate.
 Amyl formate.

Amyl heptanoate.
 Amyl hexanoate.
 Amyl octanoate.
 Anisole; methoxybenzene.
 Anisyl acetate.
 Anisyl alcohol; *p*-methoxybenzyl alcohol.
 Anisyl butyrate.
 Anisyl formate.
 Anisyl phenylacetate.
 Anisyl propionate.
 Beechwood creosote.
 Benzaldehyde dimethyl acetal.
 Benzaldehyde glyceryl acetal; 2-phenyl-*m*-dioxan-5-ol.
 Benzaldehyde propylene glycol acetal; 4-methyl-2-phenyl-*m*-dioxolane.
 Benzenethiol; thiophenol.
 Benzoin; 2-hydroxy-2-phenylacetophenone.
 Benzophenone; diphenylketone.
 Benzyl acetate.
 Benzyl acetoacetate.
 Benzyl alcohol.
 Benzyl benzoate.
 Benzyl butyl ether.
 Benzyl butyrate.
 Benzyl cinnamate.
 Benzyl 2,3-dimethylcrotonate; benzyl methyl tiglate.
 Benzyl disulfide; dibenzyl disulfide.
 Benzyl ethyl ether.
 Benzyl formate.
 3-Benzyl-4-heptanone; benzyl dipropyl ketone.
 Benzyl isobutyrate.
 Benzyl isovalerate.
 Benzyl mercaptan; α -toluenethiol.
 Benzyl methoxyethyl acetal; acetaldehyde benzyl β -methoxyethyl acetal.
 Benzyl phenylacetate.
 Benzyl propionate.
 Benzyl salicylate.
 Birch tar oil.
 Borneol; *d*-camphanol.
 Bornyl acetate.
 Bornyl formate.
 Bornyl isovalerate.
 Bornyl valerate.
 β -Bourbonene; 1,2,3,3a,3b β ,4,5,6,6a β ,6b α -decahydro-1 α -isopropyl-3a α -methyl-6-methylene-cyclobuta [1,2,3,4] dicyclopentene.
 2-Butanol.
 2-Butanone; methyl ethyl ketone.
 Butter acids.
 Butter esters.
 Butyl acetate.
 Butyl acetoacetate.
 Butyl alcohol; 1-butanol.
 Butyl anthranilate.
 Butyl butyrate.
 Butyl butyryllactate; lactic acid, butyl ester, butyrate.
 α -Butylcinnamaldehyde.
 Butyl cinnamate.

§ 172.515

21 CFR Ch. I (4–1–11 Edition)

Butyl 2-decenoate.
 Butyl ethyl malonate.
 Butyl formate.
 Butyl heptanoate.
 Butyl hexanoate.
 Butyl *p*-hydroxybenzoate.
 Butyl isobutyrate.
 Butyl isovalerate.
 Butyl lactate.
 Butyl laurate.
 Butyl levulinate.
 Butyl phenylacetate.
 Butyl propionate.
 Butyl stearate.
 Butyl sulfide.
 Butyl 10-undecenoate.
 Butyl valerate.
 Butyraldehyde.
 Cadinene.
 Camphene; 2,2-dimethyl-3-methylene-
 norbornane.
d-Camphor.
 Carvacrol; 2-*p*-cymenol.
 Carvacryl ethyl ether; 2-ethoxy-*p*-cymene.
 Carveol; *p*-mentha-6,8-dien-2-ol.
 4-Carvomenthenol; 1-*p*-menthen-4-ol; 4-
 terpinenol.
cis Carvone oxide; 1,6-epoxy-*p*-menth-8-en-2-
 one.
 Carvyl acetate.
 Carvyl propionate.
 β-Caryophyllene.
 Caryophyllene alcohol.
 Caryophyllene alcohol acetate.
 β-Caryophyllene oxide; 4-12,12-trimethyl-9-
 methylene-5-oxatricyclo [8.2.0.0^{4,6}] dode-
 cane.
 Cedarwood oil alcohols.
 Cedarwood oil terpenes.
 1,4-Cineole.
 Cinnamaldehyde ethylene glycol acetal.
 Cinnamic acid.
 Cinnamyl acetate.
 Cinnamyl alcohol; 3-phenyl-2-propen-1-ol.
 Cinnamyl benzoate.
 Cinnamyl butyrate.
 Cinnamyl cinnamate.
 Cinnamyl formate.
 Cinnamyl isobutyrate.
 Cinnamyl isovalerate.
 Cinnamyl phenylacetate.
 Cinnamyl propionate.
 Citral diethyl acetal; 3,7-dimethyl-2,6-octa-
 dienal diethyl acetal.
 Citral dimethyl acetal; 3,7-dimethyl-2,6-octa-
 dienal dimethyl acetal.
 Citral propylene glycol acetal.
 Citronellal; 3,7-dimethyl-6-octenal; rhodinal.
 Citronellol; 3,7-dimethyl-6-octen-1-ol; *d*-cit-
 ronellol.
 Citronelloxyacetaldehyde.
 Citronellyl acetate.
 Citronellyl butyrate.
 Citronellyl formate.
 Citronellyl isobutyrate.
 Citronellyl phenylacetate.
 Citronellyl propionate.

Citronellyl valerate.
p-Cresol.
 Cuminaldehyde; cuminal; *p*-isopropyl benz-
 aldehyde.
 Cyclohexaneacetic acid.
 Cyclohexaneethyl acetate.
 Cyclohexyl acetate.
 Cyclohexyl anthranilate.
 Cyclohexyl butyrate.
 Cyclohexyl cinnamate.
 Cyclohexyl formate.
 Cyclohexyl isovalerate.
 Cyclohexyl propionate.
p-Cymene.
 γ-Decalactone; 4-hydroxy-decanoic acid, γ-
 lactone.
 γ-Decalactone; 5-hydroxy-decanoic acid, δ-
 lactone.
 Decanal dimethyl acetal.
 1-Decanol; decylic alcohol.
 2-Decenal.
 3-Decen-2-one; heptylidene acetone.
 Decyl acetate.
 Decyl butyrate.
 Decyl propionate.
 Dibenzyl ether.
 4,4-Dibutyl-γ-butyrolactone; 4,4-dibutyl-4-hy-
 droxy-butyric acid, γ-lactone.
 Dibutyl sebacate.
 Diethyl malate.
 Diethyl malonate; ethyl malonate.
 Diethyl sebacate.
 Diethyl succinate.
 Diethyl tartrate.
 2,5-Diethyltetrahydrofuran.
 Dihydrocarveol; 8-*p*-menthen-2-ol; 6-methyl-
 3-isopropenylcyclohexanol.
 Dihydrocarvone.
 Dihydrocarvyl acetate.
m-Dimethoxybenzene.
p-Dimethoxybenzene; dimethyl hydro-
 quinone.
 2,4-Dimethylacetophenone.
 α,α-Dimethylbenzyl isobutyrate; phenyldi-
 methylcarbinyl isobutyrate.
 2,6-Dimethyl-5-heptenal.
 2,6-Dimethyl octanal; isodecylaldehyde.
 3,7-Dimethyl-1-octanol; tetrahydrogeraniol.
 α,α-Dimethylphenethyl acetate; benzyl-
 propyl acetate; benzyldimethylcarbinyl ac-
 etate.
 α,α-Dimethylphenethyl alcohol; dimethyl-
 benzyl carbinol.
 α,α-Dimethylphenethyl butyrate; benzyl-
 dimethylcarbinyl butyrate.
 α,α-Dimethylphenethyl formate; benzyldi-
 methylcarbinyl formate.
 Dimethyl succinate.
 1,3-Diphenyl-2-propanone; dibenzyl ketone.
 delta-Dodecalactone; 5-hydroxydodecanoic
 acid, delta lactone.
 γ-Dodecalactone; 4-hydroxydodecanoic acid γ-
 lactone.
 2-Dodecenal.
 Estragole.
p-Ethoxybenzaldehyde.
 Ethyl acetoacetate.

Food and Drug Administration, HHS

§ 172.515

Ethyl 2-acetyl-3-phenylpropionate; ethylbenzyl acetoacetate.	Formic acid
Ethyl aconitate, mixed esters.	(2-Furyl)-2-propanone; furyl acetone.
Ethyl acrylate.	1-Furyl-2-propanone; furyl acetone.
Ethyl p-anisate.	Fusel oil, refined (mixed amyl alcohols).
Ethyl anthranilate.	Geranyl acetoacetate; <i>trans</i> -3,7-dimethyl-2, 6-octadien-1-yl acetoacetate.
Ethyl benzoate.	Geranyl acetone; 6,10-dimethyl-5,9-undecadien-2-one.
Ethyl benzoylacetate.	Geranyl benzoate.
α -Ethylbenzyl butyrate; α -phenylpropyl butyrate.	Geranyl butyrate.
Ethyl brassylate; tridecanedioic acid cyclic ethylene glycol diester; cyclo 1,13-ethylenedioxytridecan-1,13-dione.	Geranyl formate.
2-Ethylbutyl acetate.	Geranyl hexanoate
2-Ethylbutyraldehyde.	Geranyl isobutyrate.
2-Ethylbutyric acid.	Geranyl isovalerate.
Ethyl cinnamate.	Geranyl phenylacetate.
Ethyl crotonate; <i>trans</i> -2-butenic acid ethyl ester.	Geranyl propionate.
Ethyl cyclohexanepropionate.	Glucose pentaacetate.
Ethyl decanoate.	Guaiacol; μ -methoxyphenol.
2-Ethylfuran.	Guaiacyl acetate; μ -methoxyphenyl acetate.
Ethyl 2-furanpropionate.	Guaiacyl phenylacetate.
4-Ethylguaiacol; 4-ethyl-2-methoxyphenol.	Guaiene; 1,4-dimethyl-7-isopropenyl- Δ 9,10-octahydroazulene.
Ethyl heptanoate.	Guaiol acetate; 1,4-dimethyl-7-(α -hydroxyisopropyl)- Δ 9,10-octahydroazulene acetate.
2-Ethyl-2-heptenal; 2-ethyl-3-butylacrolein.	γ -Heptalactone; 4-hydroxyheptanoic acid, γ -lactone.
Ethyl hexanoate.	Heptanal; enanthaldehyde.
Ethyl isobutyrate.	Heptanal dimethyl acetal.
Ethyl isovalerate.	Heptanal 1,2-glyceryl acetal.
Ethyl lactate.	2,3-Heptanedione; acetyl valeryl.
Ethyl laurate.	3-Heptanol.
Ethyl levulinate.	2-Heptanone; methyl amyl ketone.
Ethyl maltol; 2-ethyl-3-hydroxy-4H-pyran-4-one.	3-Heptanone; ethyl butyl ketone.
Ethyl 2-methylbutyrate.	4-Heptanone; dipropyl ketone.
Ethyl myristate.	<i>cis</i> -4-Heptenal; <i>cis</i> -4-hepten-1-al.
Ethyl nitrite.	Heptyl acetate.
Ethyl nonanoate.	Heptyl alcohol; enanthic alcohol.
Ethyl 2-nonynoate; ethyl octyne carbonate.	Heptyl butyrate.
Ethyl octanoate.	Heptyl cinnamate.
Ethyl oleate.	Heptyl formate.
Ethyl phenylacetate.	Heptyl isobutyrate.
Ethyl 4-phenylbutyrate.	Heptyl octanoate.
Ethyl 3-phenylglycidate.	1-Hexadecanol; cetyl alcohol.
Ethyl 3-phenylpropionate; ethyl hydrocinnamate.	ω -6-Hexadecenlactone; 16-hydroxy-6-hexadecenoic acid, ω -lactone; ambrettolide.
Ethyl propionate.	γ -Hexalactone; 4-hydroxyhexanoic acid, γ -lactone; tonkalide.
Ethyl pyruvate.	Hexanal; caproic aldehyde.
Ethyl salicylate.	2,3-Hexanedione; acetyl butyryl.
Ethyl sorbate; ethyl 2,4-hexadienoate.	Hexanoic acid; caproic acid.
Ethyl tiglate; ethyl <i>trans</i> -2-methyl-2-butenate.	2-Hexenal.
Ethyl undecanoate.	2-Hexen-1-ol.
Ethyl 10-undecenoate.	3-Hexen-1-ol; leaf alcohol.
Ethyl valerate.	2-Hexen-1-yl acetate.
Eucalyptol; 1,8-epoxy- <i>p</i> -menthane; cineole.	3-Hexenyl isovalerate.
Eugenyl acetate.	3-Hexenyl 2-methylbutyrate.
Eugenyl benzoate.	3-Hexenyl phenylacetate; <i>cis</i> -3-hexenyl phenylacetate.
Eugenyl formate.	Hexyl acetate.
Eugenyl methyl ether; 4-allylveratrole; methyl eugenol.	2-Hexyl-4-acetoxytetrahydrofuran.
Farnesol; 3,7,11-trimethyl-2,6,10-dodecatrien-1-ol.	Hexyl alcohol.
<i>d</i> -Fenchone; <i>d</i> -1,3,3-trimethyl-2-norbornanone.	Hexyl butyrate.
Fenchyl alcohol; 1,3,3-trimethyl-2-norbornanol.	α -Hexylcinnamaldehyde.
	Hexyl formate.
	Hexyl hexanoate.
	2-Hexylidene cyclopentanone.

§ 172.515

Hexyl isovalerate.
Hexyl 2-methylbutyrate.
Hexyl octanoate.
Hexyl phenylacetate; *n*-hexyl phenylacetate.
Hexyl propionate.
Hydroxycitronellal; 3,7-dimethyl-7-hydroxy-octanal.
Hydroxycitronellal diethyl acetal.
Hydroxycitronellal dimethyl acetal.
Hydroxycitronellol; 3,7-dimethyl-1,7-octanediol.
N-(4-Hydroxy-3-methoxybenzyl)-nonanamide; pelargonyl vanillylamide.
5-Hydroxy-4-octanone; butyrol.
4-(*p*-Hydroxyphenyl)-2-butanone; *p*-hydroxybenzyl acetone.
Indole.
 α -Ionone; 4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one.
 β -Ionone; 4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3-buten-2-one.
 α -Irone; 4-(2,5,6,6-tetramethyl-2-cyclohexene-1-yl)-3-buten-2-one; 6-methylionone.
Isoamyl acetate.
Isoamyl acetoacetate.
Isoamyl alcohol; isopentyl alcohol; 3-methyl-1-butanol.
Isoamyl benzoate.
Isoamyl butyrate.
Isoamyl cinnamate.
Isoamyl formate.
Isoamyl 2-furanbutyrate; α -isoamyl furfurylpropionate.
Isoamyl 2-furanpropionate; α -isoamyl furfurylacetate.
Isoamyl hexanoate.
Isoamyl isobutyrate.
Isoamyl isovalerate.
Isoamyl laurate.
Isoamyl-2-methylbutyrate; isopentyl-2-methylbutyrate.
Isoamyl nonanoate.
Isoamyl octanoate.
Isoamyl phenylacetate.
Isoamyl propionate.
Isoamyl pyruvate.
Isoamyl salicylate.
Isoborneol.
Isobornyl acetate.
Isobornyl formate.
Isobornyl isovalerate.
Isobornyl propionate.
Isobutyl acetate.
Isobutyl acetoacetate.
Isobutyl alcohol.
Isobutyl angelate; isobutyl *cis*-2-methyl-2-butenate.
Isobutyl anthranilate.
Isobutyl benzoate.
Isobutyl butyrate.
Isobutyl cinnamate.
Isobutyl formate.
Isobutyl 2-furanpropionate.
Isobutyl heptanoate.
Isobutyl hexanoate.
Isobutyl isobutyrate.

21 CFR Ch. I (4–1–11 Edition)

α -Isobutylphenethyl alcohol; isobutyl benzyl carbinol; 4-methyl-1-phenyl-2-pentanol.
Isobutyl phenylacetate.
Isobutyl propionate.
Isobutyl salicylate.
2-Isobutylthiazole.
Isobutyraldehyde.
Isobutyric acid.
Isoeugenol; 2-methoxy-4-propenylphenol.
Isoeugenyl acetate.
Isoeugenyl benzyl ether; benzyl isoeugenol.
Isoeugenyl ethyl ether; 2-ethoxy-5-propenyl-anisole; ethyl isoeugenol.
Isoeugenyl formate.
Isoeugenyl methyl ether; 4-propenylveratrole; methyl isoeugenol.
Isoeugenyl phenylacetate.
Isojasmone; mixture of 2-hexyldenecyclopentanone and 2-hexyl-2-cyclopenten-1-one.
 α -Isomethylionone; 4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-methyl-3-buten-2-one; methyl γ -ionone.
Isopropyl acetate.

-Isopropylacetophenone.
Isopropyl alcohol; isopropanol.
Isopropyl benzoate.

-Isopropylbenzyl alcohol; cuminic alcohol; *p*-cymen-7-ol.
Isopropyl butyrate.
Isopropyl cinnamate.
Isopropyl formate.
Isopropyl hexanoate.
Isopropyl isobutyrate.
Isopropyl isovalerate.

-Isopropylphenylacetaldehyde; *p*-cymen-7-carboxaldehyde.
Isopropyl phenylacetate.
3-(*p*-Isopropylphenyl)-propionaldehyde; *p*-isopropylhydrocinnamaldehyde; cuminyl acetaldehyde.
Isopropyl propionate.
Isopulegol; *p*-menth-8-en-3-ol.
Isopulegone; *p*-menth-8-en-3-one.
Isopulegyl acetate.
Isoquinoline.
Isovaleric acid.
cis-Jasmone; 3-methyl-2-(2-pentenyl)-2-cyclopenten-1-one.
Lauric aldehyde; dodecanal.
Lauryl acetate.
Lauryl alcohol; 1-dodecanol.
Lepidine; 4-methylquinoline.
Levulinic acid.
Linalool oxide; *cis*- and *trans*-2-vinyl-2-methyl-5-(1'-hydroxy-1'-methylethyl) tetrahydrofuran.
Linalyl anthranilate; 3,7-dimethyl-1,6-octadien-3-yl anthranilate.
Linalyl benzoate.
Linalyl butyrate.
Linalyl cinnamate.
Linalyl formate.
Linalyl hexanoate.
Linalyl isobutyrate.
Linalyl isovalerate.
Linalyl octanoate.
Linalyl propionate.

Maltol; 3-hydroxy-2-methyl-4H-pyran-4-one.
 Menthadienol; *p*-mentha-1,8(10)-dien-9-ol.
p-Mentha-1,8-dien-7-ol; perillyl alcohol.
 Menthadienyl acetate; *p*-mentha-1,8(10)-dien-9-yl acetate.
p-Menth-3-en-1-ol.
 1-*p*-Menthen-9-yl acetate; *p*-menth-1-en-9-yl acetate.
 Menthol; 2-isopropyl-5-methylcyclohexanol.
 Menthone; *p*-menthan-3-one.
 Menthyl acetate; *p*-menth-3-yl acetate.
 Menthyl isovalerate; *p*-menth-3-yl isovalerate.
o-Methoxybenzaldehyde.
p-Methoxybenzaldehyde; *p*-anisaldehyde.
o-Methoxycinnamaldehyde.
 2-Methoxy-4-methylphenol; 4-methylguaiacol; 2-methoxy-*p*-cresol.
 4-(*p*-Methoxyphenyl)-2-butanone; anisyl acetone.
 1-(4-Methoxyphenyl)-4-methyl-1-penten-3-one; methoxystyryl isopropyl ketone.
 1-(*p*-Methoxyphenyl)-1-penten-3-one; α -methylanisylidene acetone; ethone.
 1-(*p*-Methoxyphenyl)-2-propanone; anisylmethyl ketone; anisic ketone.
 2-Methoxy-4-vinylphenol; *p*-vinylguaiacol.
 Methyl acetate.
 4'-Methylacetophenone; *p*-methylacetophenone; methyl *p*-tolyl ketone.
 2-Methylallyl butyrate; 2-methyl-2-propenyl butyrate.
 Methyl anisate.
o-Methylanisole; *o*-cresyl methyl ether.
p-Methylanisole; *p*-cresyl methyl ether; *p*-methoxytoluene.
 Methyl benzoate.
 Methylbenzyl acetate, mixed *o*-, *m*-, *p*-.
 α -Methylbenzyl acetate; styralyl acetate.
 α -Methylbenzyl alcohol; styralyl alcohol.
 α -Methylbenzyl butyrate; styralyl butyrate.
 α -Methylbenzyl isobutyrate; styralyl isobutyrate.
 α -Methylbenzyl formate; styralyl formate.
 α -Methylbenzyl propionate; styralyl propionate.
 2-Methyl-3-buten-2-ol.
 2-Methylbutyl isovalerate.
 Methyl *p*-*tert*-butylphenylacetate.
 2-Methylbutyraldehyde; methyl ethyl acetaldehyde.
 3-Methylbutyraldehyde; isovaleraldehyde.
 Methyl butyrate.
 2-Methylbutyric acid.
 α -Methylcinnamaldehyde.
p-Methylcinnamaldehyde.
 Methyl cinnamate.
 2-Methyl-1,3-cyclohexadiene.
 Methylcyclopentenolone; 3-methylcyclopentane-1,2-dione.
 Methyl disulfide; dimethyl disulfide.
 Methyl ester of rosin, partially hydrogenated (as defined in § 172.615); methyl dihydroabietate.
 Methyl heptanoate.
 2-Methylheptanoic acid.
 6-Methyl-3,5-heptadien-2-one.
 Methyl-5-hepten-2-ol.
 6-Methyl-5-hepten-2-one.
 Methyl hexanoate.
 Methyl 2-hexanoate.
 Methyl *p*-hydroxybenzoate; methylparaben.
 Methyl α -ionone; 5-(2,6,6-trimethyl-2-cyclohexen-1-yl)-4-penten-3-one.
 Methyl β -ionone; 5-(2,6,6-trimethyl-1-cyclohexen-1-yl)-4-penten-3-one.
 Methyl Δ -ionone; 5-(2,6,6-trimethyl-3-cyclohexen-1-yl)-4-penten-3-one.
 Methyl isobutyrate.
 2-Methyl-3-(*p*-isopropylphenyl)-propionaldehyde; α -methyl-*p*-isopropylhydrocinnamaldehyde; cyclamen aldehyde.
 Methyl isovalerate.
 Methyl laurate.
 Methyl mercaptan; methanethiol.
 Methyl *o*-methoxybenzoate.
 Methyl *N*-methylantranilate; dimethyl anthranilate.
 Methyl 2-methylbutyrate.
 Methyl-3-methylthiopropionate.
 Methyl 4-methylvalerate.
 Methyl myristate.
 Methyl β -naphthyl ketone; 2'-acetonaphthone.
 Methyl nonanoate.
 Methyl 2-nonenoate.
 Methyl 2-nonynoate; methyloctyne carbonate.
 2-Methyloctanal; methyl hexyl acetaldehyde.
 Methyl octanoate.
 Methyl 2-octynoate; methyl heptene carbonate.
 4-Methyl-2,3-pentanedione; acetyl isobutyryl.
 4-Methyl-2-pentanone; methyl isobutyl ketone.
 β -Methylphenethyl alcohol; hydratropyl alcohol.
 Methyl phenylacetate.
 3-Methyl-4-phenyl-3-butene-2-one.
 2-Methyl-4-phenyl-2-butyl acetate; dimethylphenylethyl carbonyl acetate.
 2-Methyl-4-phenyl-2-butyl isobutyrate; dimethylphenyl ethylcarbonyl isobutyrate.
 3-Methyl-2-phenylbutyraldehyde; α -isopropyl phenylacetaldehyde.
 Methyl 4-phenylbutyrate.
 4-Methyl-1-phenyl-2-pentanone; benzyl isobutyl ketone.
 Methyl 3-phenylpropionate; methyl hydrocinnamate.
 Methyl propionate.
 3-Methyl-5-propyl-2-cyclohexen-1-one.
 Methyl sulfide.
 3-Methylthiopropionaldehyde; methional.
 2-Methyl-3-tolylpropionaldehyde, mixed *o*-, *m*-, *p*-.
 2-Methylundecanal; methyl nonyl acetaldehyde.
 Methyl 9-undecenoate.
 Methyl 2-undecynoate; methyl decyne carbonate.
 Methyl valerate.
 2-Methylvaleric acid.

Myrcene; 7-methyl-3-methylene-1,6-octadiene.	Phenethyl anthranilate.
Myristaldehyde; tetradecanal.	Phenethyl benzoate.
<i>d</i> -Neomenthol; 2-isopropyl-5-methylcyclohexanol.	Phenethyl butyrate.
Nerol; <i>cis</i> -3,7-dimethyl-2,6-octadien-1-ol.	Phenethyl cinnamate.
Nerolidol; 3,7,11-trimethyl-1,6,10-dodecatrien-3-ol.	Phenethyl formate.
Neryl acetate.	Phenethyl isobutyrate.
Neryl butyrate.	Phenethyl isovalerate.
Neryl formate.	Phenethyl 2-methylbutyrate.
Neryl isobutyrate.	Phenethyl phenylacetate.
Neryl isovalerate.	Phenethyl propionate.
Neryl propionate.	Phenethyl salicylate.
2,6-Nonadien-1-ol.	Phenethyl senecioate; phenethyl 3,3-dimethylacrylate.
γ -Nonalactone; 4-hydroxynonanoic acid, γ -lactone; aldehyde C-18.	Phenethyl tiglate.
Nonanal; pelargonic aldehyde.	Phenoxyacetic acid.
1,3-Nonanediol acetate, mixed esters.	2-Phenoxyethyl isobutyrate.
Nonanoic acid; pelargonic acid.	Phenylacetaldehyde; α -toluic aldehyde.
2-Nonanone; methylheptyl ketone.	Phenylacetaldehyde 2,3-butylene glycol acetal.
3-Nonanon-1-yl acetate; 1-hydroxy-3-nonanone acetate.	Phenylacetaldehyde dimethyl acetal.
Nonyl acetate.	Phenylacetaldehyde glyceryl acetal.
Nonyl alcohol; 1-nonanol.	Phenylacetic acid; α -toluic acid.
Nonyl octanoate.	4-Phenyl-2-butanol; phenylethyl methyl carbinol.
Nonyl isovalerate.	4-Phenyl-3-buten-2-ol; methyl styryl carbinol.
Nootkatone; 5,6-dimethyl-8-isopropenylbicyclo[4,4,0]-dec-1-en-3-one.	4-Phenyl-3-buten-2-one.
Ocimene; <i>trans</i> - β -ocimene; 3,7-dimethyl-1,3,6-octatriene.	4-Phenyl-2-butyl acetate; phenylethyl methyl carbonyl acetate.
γ -Octalactone; 4-hydroxyoctanoic acid, γ -lactone.	1-Phenyl-3-methyl-3-pentanol; phenylethyl methyl ethyl carbinol.
Octanal; caprylaldehyde.	1-Phenyl-1-propanol; phenylethyl carbinol.
Octanal dimethyl acetal.	3-Phenyl-1-propanol; hydrocinnamyl alcohol.
1-Octanol; octyl alcohol.	2-Phenylpropionaldehyde; hydratropaldehyde.
2-Octanol.	3-Phenylpropionaldehyde; hydrocinnamaldehyde.
3-Octanol.	2-Phenylpropionaldehyde dimethyl acetal; hydratropic aldehyde dimethyl acetal.
2-Octanone; methyl hexyl ketone.	3-Phenylpropionic acid; hydrocinnamic acid.
3-Octanone; ethyl amyl ketone.	3-Phenylpropyl acetate.
3-Octanon-1-ol.	2-Phenylpropyl butyrate.
1-Octen-3-ol; amyl vinyl carbinol.	3-Phenylpropyl cinnamate.
1-Octen-3-yl acetate.	3-Phenylpropyl formate.
Octyl acetate.	3-Phenylpropyl hexanoate.
3-Octyl acetate.	2-Phenylpropyl isobutyrate.
Octyl butyrate.	3-Phenylpropyl isobutyrate.
Octyl formate.	3-Phenylpropyl isovalerate.
Octyl heptanoate.	3-Phenylpropyl propionate.
Octyl isobutyrate.	2-(3-Phenylpropyl)-tetrahydrofuran.
Octyl isovalerate.	α -Pinene; 2-pinene.
Octyl octanoate.	β -Pinene; 2(10)-pinene.
Octyl phenylacetate.	Pine tar oil.
Octyl propionate.	Pinocarveol; 2(10)-pinen-3-ol.
ω -Pentadecalactone; 15-hydroxypentadecanoic acid, ω -lactone; pentadecanolide; angelica lactone.	Piperidine.
2,3-Pentanedione; acetyl propionyl.	Piperine.
2-Pentanone; methyl propyl ketone.	<i>d</i> -Piperitone; <i>p</i> -menth-1-en-3-one.
4-Pentenoic acid.	Piperitenone; <i>p</i> -mentha-1,4(8)-dien-3-one.
1-Penten-3-ol.	Piperitenone oxide; 1,2-epoxy- <i>p</i> -menth-4-(8)-en-3-one.
Perillaldehyde; 4-isopropenyl-1-cyclohexene-1-carboxaldehyde; <i>p</i> -mentha-1,8-dien-7-al.	Piperonyl acetate; heliotropyl acetate.
Perillyl acetate; <i>p</i> -mentha-1,8-dien-7-yl acetate.	Piperonyl isobutyrate.
α -Phellandrene; <i>p</i> -mentha-1,5-diene.	Polylimonene.
Phenethyl acetate.	Polysorbate 20; polyoxyethylene (20) sorbitan monolaurate.
Phenethyl alcohol; β -phenylethyl alcohol.	Polysorbate 60; polyoxyethylene (20) sorbitan monostereate.

Food and Drug Administration, HHS

§ 172.520

Polysorbate 80; polyoxyethylene (20) sorbitan monooleate.
 Potassium acetate.
 Propenylguaethol; 6-ethoxy-*m*-anol.
 Propionaldehyde.
 Propyl acetate.
 Propyl alcohol; 1-propanol.
p-Propyl anisole; dihydroanethole.
 Propyl benzoate.
 Propyl butyrate.
 Propyl cinnamate.
 Propyl disulfide.
 Propyl formate.
 Propyl 2-furanacrylate.
 Propyl heptanoate.
 Propyl hexanoate.
 Propyl *p*-hydroxybenzoate; propylparaben.
 3-Propylidenephthalide.
 Propyl isobutyrate.
 Propyl isovalerate.
 Propyl mercaptan.
 α -Propylphenethyl alcohol.
 Propyl phenylacetate.
 Propyl propionate.
 Pulegone; *p*-menth-4(8)-en-3-one.
 Pyridine.
 Pyroligneous acid extract.
 Pyruvaldehyde.
 Pyruvic acid.
 Rhodinol; 3,7-dimethyl-7-octen-1-ol; *l*-citronellol.
 Rhodiny acetate.
 Rhodiny butyrate.
 Rhodiny formate.
 Rhodiny isobutyrate.
 Rhodiny isovalerate.
 Rhodiny phenylacetate.
 Rhodiny propionate.
 Rum ether; ethyl oxyhydrate.
 Salicylaldehyde.
 Santalol, α and β .
 Santalyl acetate.
 Santalyl phenylacetate.
 Skatole.
 Sorbitan monostearate.
 Styrene.
 Sucrose octaacetate.
 α -Terpinene.
 γ -Terpinene.
 α -Terpineol; *p*-menth-1-en-8-ol.
 β -Terpineol.
 Terpinolene; *p*-menth-1,4(8)-diene.
 Terpinyl acetate.
 Terpinyl anthranilate.
 Terpinyl butyrate.
 Terpinyl cinnamate.
 Terpinyl formate.
 Terpinyl isobutyrate.
 Terpinyl isovalerate.
 Terpinyl propionate.
 Tetrahydrofurfuryl acetate.
 Tetrahydrofurfuryl alcohol.
 Tetrahydrofurfuryl butyrate.
 Tetrahydrofurfuryl propionate.
 Tetrahydro-pseudo-ionone; 6,10-dimethyl-9-undecen-2-one.
 Tetrahydrolinalool; 3,7-dimethyloctan-3-ol.

Tetramethyl ethylcyclohexenone; mixture of 5-ethyl-2,3,4,5-tetramethyl-2-cyclohexen-1-one and 5-ethyl-3,4,5,6-tetramethyl-2-cyclohexen-1-one.
 2-Thienyl mercaptan; 2-thienylthiol.
 Thymol.
 Tolualdehyde glyceryl acetal, mixed *o*, *m*, *p*.
 Tolualdehydes, mixed *o*, *m*, *p*.
p-Tolylacetaldehyde.
o-Tolyl acetate; *o*-cresyl acetate.
p-Tolyl acetate; *p*-cresyl acetate.
 4-(*p*-Tolyl)-2-butanone; *p*-methylbenzylacetone.
p-Tolyl isobutyrate.
p-Tolyl laurate.
p-Tolyl phenylacetate.
 2-(*p*-Tolyl)-propionaldehyde; *p*-methylhydropropionaldehyde.
 Tributyl acetylacrylate.
 2-Tridecenal.
 2,3-Undecadiene; acetyl nonyl.
 γ -Undecalactone; 4-hydroxyundecanoic acid γ -lactone; peach aldehyde; aldehyde C-14.
 Undecenol.
 2-Undecanone; methyl nonyl ketone.
 9-Undecenol; undecenoic aldehyde.
 10-Undecenol.
 Undecen-1-ol; undecylenic alcohol.
 10-Undecen-1-yl acetate.
 Undecyl alcohol.
 Valeraldehyde; pentanal.
 Valeric acid; pentanoic acid.
 Vanillin acetate; acetyl vanillin.
 Veratraldehyde.
 Verbenol; 2-pinen-4-ol.
 Zingerone; 4-(4-hydroxy-3-methoxyphenyl)-2-butanone.

(c) Δ -Decalactone and Δ -dodecalactone when used separately or in combination in oleomargarine are used at levels not to exceed 10 parts per million and 20 parts per million, respectively, in accordance with §166.110 of this chapter.

(d) BHA (butylated hydroxyanisole) may be used as an antioxidant in flavoring substances whereby the additive does not exceed 0.5 percent of the essential (volatile) oil content of the flavoring substance.

[42 FR 14491, Mar. 15, 1977, as amended at 42 FR 23148, May 6, 1977; 43 FR 19843, May 9, 1978; 45 FR 22915, Apr. 4, 1980; 47 FR 27810, June 25, 1982; 48 FR 10812, Mar. 15, 1983; 48 FR 51907, Nov. 15, 1983; 49 FR 5747, Feb. 15, 1984; 50 FR 42932, Oct. 23, 1985; 54 FR 7402, Feb. 21, 1989; 61 FR 14245, Apr. 1, 1996; 69 FR 24511, May 4, 2004]

§ 172.520 Cocoa with dioctyl sodium sulfosuccinate for manufacturing.

The food additive "cocoa with dioctyl sodium sulfosuccinate for manufacturing," conforming to §163.117 of this