



[FDA Home](#)³ [Medical Devices](#)⁴ [Databases](#)⁵

CFR - Code of Federal Regulations Title 21

The information on this page is current as of April 1 2019.

For the most up-to-date version of CFR Title 21, go to the Electronic Code of Federal Regulations (eCFR).⁶

New Search

[Help](#)⁷ | [More About 21CFR](#)⁸

[Code of Federal Regulations]
[Title 21, Volume 3]
[Revised as of April 1, 2019]
[CITE: 21CFR172.510]

TITLE 21--FOOD AND DRUGS
CHAPTER I--FOOD AND DRUG ADMINISTRATION
DEPARTMENT OF HEALTH AND HUMAN SERVICES
SUBCHAPTER B--FOOD FOR HUMAN CONSUMPTION (CONTINUED)
PART 172 -- FOOD ADDITIVES PERMITTED FOR DIRECT ADDITION TO FOOD FOR HUMAN CONSUMPTION

Subpart F--Flavoring Agents and Related Substances

Sec. 172.510 Natural flavoring substances and natural substances used in conjunction with flavors.

Natural flavoring substances and natural 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 physical or technical effect and in accordance with all the principles of good manufacturing practice.

(b) In the appropriate forms (plant parts, fluid and solid extracts, concentrates, absolutes, oils, gums, balsams, resins, oleoresins, waxes, and distillates) 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, previously sanctioned for such use, or regulated in any section of this part.

Common name	Scientific name	Limitations
aloe	aloe perryi Baker, A. barbadensis Mill., A. ferox Mill., and hybrids of this sp. with A. africana Mill. and A. spicata Baker	
Althea root and flowers	Althea officinalis L	
Amyris (West Indian sandalwood)	Amyris balsamifera L	
Angola weed	Roccella fuciformis Ach	In alcoholic beverages only
Arnica flowers	Arnica montana L., A. fulgens Pursh, A. sororia Greene, or A. cordifolia Hooker	Do.
Artemisia (wormwood)	Artemisia spp	Finished food thujone free ¹
Artichoke leaves	Cynara scolymus L	In alcoholic beverages only
Benzoin resin	Styrax benzoin Dryander, S. paralleloneurus	

	Perkins, <i>S. tonkinensis</i> (Pierre) Craib ex Hartwich, or other spp. of the Section Anthostyrax of the genus <i>Styrax</i>	
Blackberry bark	<i>Rubus</i> , Section <i>Eubatus</i>	
Boldus (boldo) leaves	<i>Peumus boldus</i> Mol	Do.
Boronia flowers	<i>Boronia megastigma</i> Nees	
Bryonia root	<i>Bryonia alba</i> L., or <i>B. diocia</i> Jacq	Do.
Buchu leaves	<i>Barosma betulina</i> Bartl. et Wendl., <i>B. crenulata</i> (L.) Hook. or <i>B. serratifolia</i> Willd	
Buckbean leaves	<i>Menyanthes trifoliata</i> L	Do.
Cajeput	<i>Melaleuca leucadendron</i> L. and other <i>Melaleuca</i> spp	
Calumba root	<i>Jateorhiza palmata</i> (Lam.) Miers	Do.
Camphor tree	<i>Cinnamomum camphora</i> (L.) Nees et Eberm	Safrole free
Cascara sagrada	<i>Rhamnus purshiana</i> DC	
Cassie flowers	<i>Acacia farnesiana</i> (L.) Willd	
Castor oil	<i>Ricinus communis</i> L	
Catechu, black	<i>Acacia catechu</i> Willd	
Cedar, white (aborvitae), leaves and twigs	<i>Thuja occidentalis</i> L	Finished food thujone free ¹
Centuary	<i>Centaureum umbellatum</i> Gilib	In alcoholic beverages only
Cherry pits	<i>Prunus avium</i> L. or <i>P. cerasus</i> L	Not to exceed 25 p.p.m. prussic acid
Cherry-laurel leaves	<i>Prunus laurocerasus</i> L	Do.
Chestnut leaves	<i>Castanea dentata</i> (Marsh.) Borkh	
Chirata	<i>Swertia chirata</i> Buch.-Ham	In alcoholic beverages only In beverages only; not more than 83 p.p.m. total cinchona alkaloids in finished beverage
Cinchona, red, bark	<i>Cinchona succirubra</i> Pav. or its hybrids	
Cinchona, yellow, bark	<i>Cinchona ledgeriana</i> Moens, <i>C. calisaya</i> Wedd., or hybrids of these with other spp. of <i>Cinchona</i> .	Do.
Copaiba	South American spp. of <i>Copaifera</i> L	
Cork, oak	<i>Quercus suber</i> L., or <i>Q. occidentalis</i> F. Gay	In alcoholic beverages only
Costmary	<i>Chrysanthemum balsamita</i> L	Do.
Costus root	<i>Saussurea lappa</i> Clarke	
Cubeb	<i>Piper cubeba</i> L. f	
Currant, black, buds and leaves	<i>Ribes nigrum</i> L	
Damiana leaves	<i>Turnera diffusa</i> Willd	
Davana	<i>Artemisia pallens</i> Wall	
Dill, Indian	<i>Anethum sowa</i> Roxb. (<i>Peucedanum graveolens</i> Benth et Hook., <i>Anethum graveolens</i> L.)	
Dittany (fraxinella) roots	<i>Dictamnus albus</i> L	Do.
Dittany of	<i>Origanum dictamnus</i> L	

Crete		
Dragon's blood (dracorubin)	Daemonorops spp	
Elder tree leaves	Sambucus nigra L	In alcoholic beverages only; not to exceed 25 p.p.m. prussic acid in the flavor
Elecampane rhizome and roots	Inula helenium L	In alcoholic beverages only
Elemi	Canarium commune L. or C. luzonicum Miq	
Erigeron	Erigeron canadensis L	
Eucalyptus globulus leaves	Eucalyptus globulus Labill	
Fir ("pine") needles and twigs	Abies sibirica Ledeb., A. alba Mill., A. sachalinesis Masters or A. mayriana Miyabe et Kudo	
Fir, balsam, needles and twigs	Abies balsamea (L.) Mill	
Galanga, greater	Alpinia galanga Willd	Do.
Galbanum	Ferula galbaniflua Boiss. et Buhse and other Ferula spp	
Gambir (catechu, pale)	Uncaria gambir Roxb	
Genet flowers	Spartium junceum L	
Gentian rhizome and roots	Gentiana lutea L	
Gentian, stemless	Gentiana acaulis L	Do.
Germander, chamaedrys	Teucrium chamaedrys L	Do.
Germander, golden	Teucrium polium L	Do.
Guaiac	Guaiacum officinale L., G. santum L., Bulnesia sarmienti Lor	
Guarana	Paullinia cupana HBK	
Haw, black, bark	Viburnum prunifolium L	
Hemlock needles and twigs	Tsuga canadensis (L.) Carr. or T. heterophylla (Raf.) Sarg	
Hyacinth flowers	Hyacinthus orientalis L	
Iceland moss	Cetraria islandica Ach	Do.
Imperatoria	Peucedanum ostruthium (L.). Koch (Imperatoria ostruthium L.)	
Iva	Achillea moschata Jacq	Do.
Labdanum	Cistus spp	
Lemon-verbena	Lippia citriodora HBK	Do.
Lin aloe wood	Bursera delpechiana Poiss. and other Bursera spp	
Linden leaves	Tillia spp	Do.
Lovage	Levisticum officinale Koch	
Lungmoss (lungwort)	Sticta pulmonacea Ach	
Maidenhair	Adiantum capillus-veneris L	Do.

fern		
Maple, mountain	<i>Acer spicatum</i> Lam	
Mimosa (black wattle) flowers	<i>Acacia decurrens</i> Willd. var. <i>dealbata</i>	
Mullein flowers	<i>Verbascum phlomoides</i> L. or <i>V. thapsiforme</i> Schrad	Do.
Myrrh	<i>Commiphora molmol</i> Engl., <i>C. abyssinica</i> (Berg) Engl., or other <i>Commiphora</i> spp	
Myrtle leaves	<i>Myrtus communis</i> L	Do.
Oak, English, wood	<i>Quercus robur</i> L	Do.
Oak, white, chips	<i>Quercus alba</i> L	
Oak moss	<i>Evernia prunastri</i> (L.) Ach., <i>E. furfuracea</i> (L.) Mann, and other lichens	Finished food thujone free ¹
Olibanum	<i>Boswellia carteri</i> Birdw. and other <i>Boswellia</i> spp	
Opopanax (bisabolmyrrh)	<i>Opopanax chironium</i> Koch (true opopanax) of <i>Commiphora erythraea</i> Engl. var. <i>lilabrescens</i>	
Orris root	<i>Iris germanica</i> L. (including its variety <i>florentina</i> Dykes) and <i>I. pallida</i> Lam	
Pansy	<i>Viola tricolor</i> L	In alcoholic beverages only
Passion flower	<i>Passiflora incarnata</i> L	
Patchouly	<i>Pogostemon cablin</i> Benth. and <i>P. heyneanus</i> Benth	In alcoholic beverages only; not to exceed 25 p.p.m. prussic acid in the flavor
Peach leaves	<i>Prunus persica</i> (L.) Batsch	
Pennyroyal, American	<i>Hedeoma pulegioides</i> (L.) Pers	
Pennyroyal, European	<i>Mentha pulegium</i> L	
Pine, dwarf, needles and twigs	<i>Pinus mugo</i> Turra var. <i>pumilio</i> (Haenke) Zenari	
Pine, Scotch, needles and twigs	<i>Pinus sylvestris</i> L	
Pine, white, bark	<i>Pinus strobus</i> L	In alcoholic beverages only
Pine, white oil	<i>Pinus palustris</i> Mill., and other <i>Pinus</i> spp	
Poplar buds	<i>Populus balsamifera</i> L. (<i>P. tacamahacca</i> Mill.), <i>P.</i> <i>candicans</i> Ait., or <i>P. nigra</i> L	Do.
Quassia	<i>Picrasma excelsa</i> (Sw.) Planch, or <i>Quassia amara</i> L	
Quebracho bark	<i>Aspidosperma quebracho-blanco</i> Schlecht, or (<i>Quebrachia lorentzii</i> (Griseb))	Schinopsis <i>lorentzii</i> (Griseb.) Engl.
Quillaia (soapbark)	<i>Quillaja saponaria</i> Mol	
Red saunders (red sandalwood)	<i>Pterocarpus san alinus</i> L	In alcoholic beverages only
Rhatany root	<i>Krameria triandra</i> Ruiz et Pav. or <i>K. argentea</i> Mart	
Rhubarb, garden root	<i>Rheum rhaponticum</i> L	Do.
Rhubarb root	<i>Rheum officinale</i> Baill., <i>R. palmatum</i> L., or other	

	spp. (excepting <i>R. rhaponticum</i> L.) or hybrids of Rheum grown in China	
Roselle	<i>Hibiscus sabdariffa</i> L	Do.
Rosin (colophony)	<i>Pinus palustris</i> Mill., and other <i>Pinus</i> spp	Do.
St. Johnswort leaves, flowers, and caulis	<i>Hypericum perforatum</i> L	Hypericin-free alcohol distillate form only; in alcoholic beverages only
Sandalwood, white (yellow, or East Indian)	<i>Santalum album</i> L	
Sandarac	<i>Tetraclinis articulata</i> (Vahl.), Mast	In alcoholic beverages only
Sarsaparilla	<i>Smilax aristolochiaefolia</i> Mill., (Mexican sarsaparilla), <i>S. regelii</i> Killip et Morton (Honduras sarsaparilla), <i>S. febrifuga</i> Kunth (Ecuadorean sarsaparilla), or undetermined <i>Smilax</i> spp. (Ecuadorean or Central American sarsaparilla)	
Sassafras leaves	<i>Sassafras albidum</i> (Nutt.) Nees	Safrole free
Senna, Alexandria	<i>Cassia acutifolia</i> Delile	
Serpentaria (Virginia snakeroot)	<i>Aristolochia serpentaria</i> L	In alcoholic beverages only
Simaruba bark Snakeroot, Canadian (wild ginger)	<i>Simaruba amara</i> Aubl <i>Asarum canadense</i> L	Do.
Spruce needles and twigs	<i>Picea glauca</i> (Moench) Voss or <i>P. mariana</i> (Mill.) BSP	
Storax (styrax)	<i>Liquidambar orientalis</i> Mill. or <i>L. styraciflua</i> L	
Tagetes (marigold)	<i>Tagetes patula</i> L., <i>T. erecta</i> L., or <i>T. minuta</i> L. (<i>T. glandulifera</i> Schrank)	As oil only
Tansy	<i>Tanacetum vulgare</i> L	In alcoholic beverages only; finished alcoholic beverage thujone free ¹
Thistle, blessed (holy thistle)	<i>Onicus benedictus</i> L	In alcoholic beverages only
Thymus capitatus (Spanish "origanum")	<i>Thymus capitatus</i> Hoffmg. et Link	
Tolu	<i>Myroxylon balsamum</i> (L.) Harms	
Turpentine	<i>Pinus palustris</i> Mill. and other <i>Pinus</i> spp. which yield terpene oils exclusively	
Valerian rhizome and roots	<i>Valeriana officinalis</i> L	
Veronica	<i>Veronica officinalis</i> L	Do.
Vervain, European	<i>Verbena officinalis</i> L	Do.
Vetiver	<i>Vetiveria zizanioides</i> Stapf	Do.

Violet, Swiss Viola calcarata L		
Walnut husks (hulls), leaves, and green nuts	Juglans nigra L. or J. regia L	
Woodruff, sweet	Asperula odorata L	In alcoholic beverages only
Yarrow	Achillea millefolium L	In beverages only; finished beverage thujone free ¹
Yerba santa	Eriodictyon californicum (Hook, et Arn.) Torr	
Yucca, Joshua- tree	Yucca brevifolia Engelm	
Yucca, Mohave	Yucca schidigera Roez l ex Ortgies (Y. mohavensis Sarg.)	

¹As determined by using the method (or, in other than alcoholic beverages, a suitable adaptation thereof) in section 9.129 of the "Official Methods of Analysis of the Association of Official Analytical Chemists," 13th Ed. (1980), which is incorporated by reference. Copies may be obtained from the AOAC INTERNATIONAL, 481 North Frederick Ave., suite 500, Gaithersburg, MD 20877, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

<http://www.archives.gov/federalregister/codeoffederalregulations/ibrlocations.html>.

[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]

Links on this page:

1. <http://www.addthis.com/bookmark.php?u508=true&v=152&username=fdomain>
2. <http://www.addthis.com/bookmark.php>
3. <https://www.fda.gov/>
4. <https://www.fda.gov/MedicalDevices/default.htm>
5. <https://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/Databases/default.htm>
6. http://www.ecfr.gov/cgi-bin/text-idx?SID=3ee286332416f26a91d9e6d786a604ab&mc=true&tpl=/ecfrbrowse/Title21/21tab_02.tpl
7. </scripts/cdrh/cfdocs/search/default.cfm?FAQ=true>
8. <https://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/Databases/ucm135680.htm>

Page Last Updated: 09/19/2019

Note: If you need help accessing information in different file formats, see Instructions for Downloading Viewers and Players.

Language Assistance Available: Español | 繁體中文 | Tiếng Việt | 한국어 | Tagalog | Русский | العربية | Kreyòl Ayisyen | Français | Polski | Português | Italiano | Deutsch | 日本語 | فارسی | English

Accessibility Contact FDA Careers FDA Basics FOIA No FEAR Act Nondiscrimination Website Policies

FDA

U.S. Food and Drug Administration
10903 New Hampshire Avenue
Silver Spring, MD 20993
Ph. 1-888-INFO-FDA (1-888-463-6332)
Contact FDA



For Government For Press

Combination Products Advisory Committees Science & Research Regulatory Information Safety Emergency
Preparedness International Programs News & Events Training and Continuing Education
Inspections/Compliance State & Local Officials Consumers Industry Health Professionals FDA Archive



U.S. Department of **Health & Human Services**

Links on this page:

1. <http://www.addthis.com/bookmark.php?u508=true&v=152&username=fdomain>
2. <http://www.addthis.com/bookmark.php>
3. <https://www.fda.gov/>
4. <https://www.fda.gov/MedicalDevices/default.htm>
5. <https://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/Databases/default.htm>
6. [http://www.ecfr.gov/cgi-bin/text-idx?
SID=3ee286332416f26a91d9e6d786a604ab&mc=true&tpl=/ecfrbrowse/Title21/21tab_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?SID=3ee286332416f26a91d9e6d786a604ab&mc=true&tpl=/ecfrbrowse/Title21/21tab_02.tpl)
7. </scripts/cdrh/cfdocs/search/default.cfm?FAQ=true>
8. <https://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/Databases/ucm135680.htm>

