

# C FERULIC-ACID

## Chemid

FERULICACID

\*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Achillea millefolium	Plant	--	--		Tunon, H., Thorsell, W., and Bohlin, L. 1993. Mosquito Repelling Activity of Compounds Occurring in Achillea millefolium L. (Asteraceae). Economic Botany 48(2): 111-120, 1994.
Actaea cimicifuga	Rhizome	--	--		--
Actaea dahurica	Rhizome	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
Agrimonia eupatoria	Plant	--	--		--
Ajuga iva	Shoot	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Ajuga iva	Plant	1000	1000	0.8391367166661186	Jim Duke's personal files.
Allium ampeloprasum	Plant	--	--		--
Allium cepa	Bulb	--	0.5	-1	--
Allium cepa	Leaf	--	--		Das, V. S. R., Rao, J. V. S. 1964. Phenolic Acids of Onion Plant. Curr. Sci., 33(15): 471-472.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Allium cepa	Root	--	--		Das, V. S. R., Rao, J. V. S. 1964. Phenolic Acids of Onion Plant. Curr. Sci., 33(15): 471-472.
Allium sativum var. sativum	Bulb	7	27	1	--
Allium schoenoprasum	Leaf	--	0.5	-1.0842680798316504	--
Althaea officinalis	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
Althaea officinalis	Leaf	--	--		--
Althaea officinalis	Root	--	--		--
Althaea officinalis	Flower	--	--		--
Ananas comosus	Plant	200	760	0.30089312112081323	--
Anethum graveolens	Fruit	--	--		--
Anethum graveolens	Seed	--	--		--
Angelica sinensis	Root	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Angelica sinensis	Plant	--	940	0.7045758177797922	Jim Duke's personal files.
Apium graveolens	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Arachis hypogaea	Seed	45	45	-0.3720643105185383	--
Arctostaphylos uva-ursi	Leaf	--	--		--
Artemisia dracuncululus	Leaf	38	38	2.436082828712669	--
Aspalathus linearis	Shoot	--	0.66		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Astragalus membranaceus	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Avena sativa	Seed	--	--		--
Ballota nigra	Plant	--	--		--
Basella alba	Plant	--	--		--
Beta vulgaris	Leaf	--	--		--
Brassica nigra	Seed	--	--		Jim Duke's personal files.
Brassica oleracea var. botrytis l.	Leaf	--	13	0.08918222301645602	--
Brassica oleracea var. capitata l.	Leaf	4	20	0.7463143926113956	--
Brassica oleracea var. gemmifera	Leaf	10	10	-0.19244584966708952	--
Brassica oleracea var. italica	Leaf	--	13	0.08918222301645602	--
Brassica pekinensis	Leaf	6	6	-0.5679499465784835	--
Capsicum frutescens	Fruit	--	--		--
Catalpa ovata	Wood	--	--		--
Celosia cristata	Flower	--	--		--
Centaurea cyanus	Flower	--	--		Jim Duke's personal files.
Centaurium erythraea	Plant	--	--		--
Ceratonia siliqua	Fruit	--	--		Wealth of India.
Chamaemelum nobile	Plant	--	--		--
Chenopodium album	Fruit	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Chenopodium ambrosioides	Fruit	--	--		--
Cichorium intybus	Plant	--	--		--
Cichorium intybus	Leaf	--	0.5	-1.0842680798316504	--
Cimicifuga dahurica	Rhizome	--	--		--
Citrullus colocynthis	Fruit	--	--		--
Citrus limon	Fruit	14	40	-0.3813850356982369	--
Citrus paradisi	Fruit	25	34	-0.5720775535473553	--
Citrus paradisi	Pericarp	25	160	-1	--
Citrus reticulata	Pericarp	--	--		--
Citrus sinensis	Fruit	10	19	-0.7627700713964738	--
Citrus sinensis	Fruit Juice	--	--		Jim Duke's personal files.
Citrus sinensis	Pericarp	20	180	1	--
Cnicus benedictus	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Cnicus benedictus	Shoot	--	--		Jim Duke's personal files.
Cocos nucifera	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Coix lacryma-jobi	Pericarp	--	--		--
Commiphora wightii	Resin, Exudate, Sap	--	--		Jim Duke's personal files.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Convallaria majalis	Plant	--	--		--
Coptis chinensis	Rhizome	--	--		--
Coptis japonica	Rhizome	--	--		--
Coptis spp	Rhizome	--	--		--
Coriandrum sativum	Plant	--	11	-1.3788754333101605	--
Cucumis melo	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
Cucumis sativus	Fruit	--	--		--
Cucurbita pepo	Plant	--	--		--
Cydonia oblonga	Fruit	--	--		--
Cynara cardunculus	Plant	--	--		--
Datura stramonium	Plant	--	--		--
Daucus carota	Root	--	--		--
Digitalis purpurea	Leaf	--	--		--
Dioscorea alata	Plant	--	--		--
Dipteryx odorata	Leaf	--	--		Grenand, P., Moretti, C., and Jacquemin, H. 1987. Pharmacopees Traditionnelles en Guyane. l'ORSTROM, Paris. 569 pp.
Echinacea spp	Plant	--	--		--
Elaeagnus angustifolia	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Eleutherococcus senticosus	Root	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Equisetum arvense	Plant	--	--		--
Equisetum hyemale	Plant	--	--		--
Eucalyptus citriodora	Leaf	--	--		--
Eucalyptus globulus	Leaf	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Euphorbia hirta	Leaf	--	--		--
Euphorbia lathyris	Leaf	--	--		--
Euphrasia officinalis	Plant	--	--		Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.
Ferula assa-foetida	Essential Oil	--	--		--
Ferula assa-foetida	Resin, Exudate, Sap	13000	13000		--
Ferula assa-foetida	Gum	--	--		--
Ficus carica	Plant	--	--		--
Foeniculum vulgare	Fruit	--	--		--
Foeniculum vulgare	Seed	--	0.5	-0.432099551506119	--
Gaultheria procumbens	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Glechoma hederacea	Plant	--	--		--
Glycine max	Plant	1	4	-1.3945742048468985	--
Glycine max	Seed	1	4	-0.42737767861945536	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Glycine max	Shoot	--	--		--
Glycyrrhiza glabra	Plant	--	--		--
Helianthus annuus	Pollen Or Spore	2	3		--
Hierochloe odorata	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Hordeum vulgare	Seed	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Humulus lupulus	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Huperzia spp	Plant	--	--		--
Hura crepitans	Leaf	--	--		--
Hypericum perforatum	Plant	--	--		--
Hyssopus officinalis	Plant	--	--		Jim Duke's personal files.
Juglans nigra	Seed	--	--		--
Juglans regia	Seed	0.4	1	-0.43142499823659564	--
Juglans regia	Testa	10	65		--
Juniperus communis	Leaf	--	--		--
Kalanchoe pinnata	Plant	--	--		--
Lactuca sativa	Plant	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Lens culinaris	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
Levisticum officinale	Fruit	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
Ligustrum japonicum	Flower	--	--		--
Linum usitatissimum	Seed	--	--		--
Lycopersicon esculentum	Fruit	--	--		--
Lycopodium clavatum	Plant	--	--		--
Lycopodium selago	Plant	--	--		--
Lycopus europeus	Plant	--	--		Jim Duke's personal files.
Malus domestica	Fruit	4	95	1.7162326606420661	--
Medicago sativa	Tissue Culture	--	--		--
Medicago sativa	Leaf	--	--		--
Melia azedarach	Plant	--	--		--
Melilotus officinalis	Plant	--	--		Pharmazie, 46: 156, 1991.
Melilotus officinalis	Shoot	--	--		--
Mentha x rotundifolia	Shoot	--	--		Jim Duke's personal files.
Menyanthes trifoliata	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Myroxylon balsamum	Plant	--	--		--



<b>Plant</b>	<b>Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference</b>
Nicotiana tabacum	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Oenothera biennis	Plant	--	--		--
Ononis spinosa	Root	--	--		Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
Opopanax chironium	Resin, Exudate, Sap	--	--		--
Oryza sativa	Plant	--	--		--
Panax ginseng	Root	--	--		--
Panax quinquefolius	Plant	--	--		--
Papaver somniferum	Pericarp	--	--		--
Phaseolus vulgaris	Plant	--	--		--
Pinus sylvestris	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Pisum sativum	Seed	--	--		--
Plantago major	Plant	--	--		--
Polygala senega	Root	--	--		--
Portulaca oleracea	Plant	--	--		--
Prunus cerasus	Plant	--	--		--

<b>Plant</b>	<b>Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference</b>
Prunus domestica	Fruit	--	--		Jim Duke's personal files.
Prunus dulcis	Plant	--	--		--
Prunus persica	Plant	--	--		--
Prunus spinosa	Plant	--	--		--
Pteridium aquilinum	Plant	--	--		--
Punica granatum	Fruit	--	--		Seeram, N. P., Schulman, R. N., and Heber, D., eds. 2006. Pomegranates - Ancient Roots to Modern Medicine. Taylor & Francis. Boca Raton, FL. 244 pp.
Raphanus sativus	Root	16	16		--
Rheum officinale	Root	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Rheum rhabarbarum	Pt	8	8		--
Rheum rhabarbarum	Root	--	--		--
Ribes nigrum	Fruit	--	--		--
Ribes uva-crispa	Fruit	--	--		--
Ricinus communis	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Rosa canina	Stem	--	--		--
Rosa canina	Tissue Culture	--	--		--
Rubus fruticosus	Fruit	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Rubus idaeus	Fruit	--	--		--
Rubus idaeus	Plant	--	--		--
Salvia officinalis	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
Salvia sp.	Seed	2136	2136	2.448917462628234	Phenolic Compounds in Food and Their Effects on Health, 67.
Sambucus nigra	Plant	--	--		--
Serenoa repens	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Sesamum indicum	Fruit	--	--		--
Sesamum indicum	Leaf	--	--		--
Solanum melongena	Root	--	--		--
Solanum tuberosum	Tuber	13	225		--
Solidago gigantea	Plant	--	1040	0.9288439825903361	--
Sophora japonica	Plant	--	--		--
Spinacia oleracea	Leaf	16	16	0.37081029570000157	--
Spinacia oleracea	Inflorescence	--	--		--
Stellaria media	Shoot	--	--		--
Taraxacum officinale	Flower	--	--		--
Taxus baccata	Leaf	0.1	3.5	-0.8026400071481049	--
Tecoma stans	Plant	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Theobroma cacao	Seed	--	--		--
Thymus vulgaris	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
Triticum aestivum	Seed	15	32	-0.3896026955261461	--
Urtica dioica	Plant	--	--		--
Vaccinium corymbosum	Plant	--	--		--
Vaccinium macrocarpon	Fruit	--	--		--
Vaccinium myrtillus	Fruit	--	--		--
Vaccinium myrtillus	Leaf	--	--		--
Vaccinium myrtillus	Fruit Juice	--	--		--
Vanilla planifolia	Root	--	--		--
Vicia faba	Plant	--	--		--
Viola odorata	Plant	--	--		--
Vitis vinifera	Fruit	--	--		--
Zea mays	Leaf	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Zea mays	Seed	6	27	-0.39634822822137994	--
Zea mays	Sprout Seedling	--	--		--
Zingiber officinale	Plant	--	--		Stitt, Paul. Why George should eat broccoli.