

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Echinacea angustifolia*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	1-PENTADECENE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
101	APIGENIN	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
47	BETA-SITOSTEROL	Root	--	--		
14	BETAINE	Root	--	1000	-0.2884566503805383	Jim Duke's personal files.
35	BORNEOL	Shoot	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
12	BORNYL-ACETATE	Shoot	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
3	CAFTARIC-ACID	Root	--	--		Jim Duke's personal files.
31	CARYOPHYLLENE	Shoot	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
6	CARYOPHYLLENE-EPOXIDE	Shoot	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
10	CHICORIC-ACID	Root	--	--		Jim Duke's personal files.
77	CHLOROGENIC-ACID	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
14	CICHORIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
23	CYNARIN	Root	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ECHINACEIN	Root	4	100	0.7071067811865475	
1	ECHINACIN-B	Root	--	--		Jim Duke's personal files.
10	ECHINACOSIDE	Flower	1000	10000		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
10	ECHINACOSIDE	Root	3000	13000	-1.414213562373095	
2	ECHINOLONE	Root	--	3		Jim Duke's personal files.
2	GERMACRENE-D	Shoot	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
19	INULIN	Root	50000	90000	-0.9004071864868817	
4	ISOCHLOROGENIC-ACID	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
11	ISORHAMNETIN	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
75	KAEMPFEROL	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
27	LINOLEIC-ACID	Root	--	--		
78	LUTEOLIN	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
7	LUTEOLIN-7-GLUCOSIDE	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
6	MYRISTIC-ACID	Root	--	--		
18	OLEIC-ACID	Root	--	--		

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13	PALMITIC-ACID	Root	--	--		
176	QUERCETIN	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
4	RUTOSIDE	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
12	STIGMASTEROL	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
14	SUCROSE	Root	--	69200	-0.5583180295224436	Jim Duke's personal files.
1	TUSSILAGINE	Root	15	60		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.