

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in Echinacea pallida

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2,3-O-DI-5-(ALPHA-CARBOXY-BETA-(3,4-DIHYDROXY-PHENYL)-ETHYL)-CAFFEOYL TARTARIC-ACID	Leaf	--	--		Jim Duke's personal files.
0	2-O-CAFFEOYL-3-O-5-(ALPHA-CARBOXY-BETA-(3,4-DIHYDROXY-PHENYL)-ETHYL)-CAFFEOYL TARTARIC-ACID	Leaf	--	--		Jim Duke's personal files.
0	2-O-CAFFEOYL-3-O-FERULOYL TARTARIC-ACID	Flower	--	--		Jim Duke's personal files.
0	2-O-CAFFEOYL-3-O-FERULOYL TARTARIC-ACID	Leaf	--	--		Jim Duke's personal files.
3	3,5-DI-O-CAFFEOYL QUINIC-ACID	Flower	--	--		Jim Duke's personal files.
3	3,5-DI-O-CAFFEOYL QUINIC-ACID	Leaf	--	--		Jim Duke's personal files.
3	3,5-DI-O-CAFFEOYL QUINIC-ACID	Root	--	--		Jim Duke's personal files.
0	6-O-CAFFEOYL ECHINACOSIDE	Plant	--	--		
0	6-O-CAFFEOYL ECHINACOSIDE	Root	--	--		Jim Duke's personal files.
0	8-HYDROXY-PENTADEC-TRANS-9-ENE-11,13-DIYN-2-ONE	Root	--	--		Jim Duke's personal files.
0	8-HYDROXY-PENTADECA-9-TRANS-ENE-11,13-DIYN-2-ONE	Root	--	--		Jim Duke's personal files.
0	8-HYDROXY-PENTADECA-TRANS-9-CIS-13-DIENE-11-YN-2-ONE	Root	--	--		Jim Duke's personal files.
0	8-HYDROXY-TETRADECA-9-TRANS-ENE-11,13-DIYN-2-ONE	Root	--	--		Jim Duke's personal files.
47	BETA-SITOSTEROL	Root	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	Leaf	--	--		Jim Duke's personal files.
3	CAFTARIC-ACID	Root	--	--		Jim Duke's personal files.
3	CAFTARIC-ACID	Flower	--	--		Jim Duke's personal files.
0	CALCEOLARIOSIDE-A	Root	--	--		Jim Duke's personal files.
0	CALCEOLARIOSIDE-A	Flower	--	--		Jim Duke's personal files.
0	CALCEOLARIOSIDE-A	Plant	--	--		
0	CALCEOLARIOSIDE-A	Leaf	--	--		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.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	Flower	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
10	CHICORIC-ACID	Leaf	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
10	CHICORIC-ACID	Root	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
77	CHLOROGENIC-ACID	Leaf	--	--		
77	CHLOROGENIC-ACID	Flower	--	--		Jim Duke's personal files.
77	CHLOROGENIC-ACID	Root	--	--		Jim Duke's personal files.
14	CICHORIC-ACID	Leaf	--	--		Jim Duke's personal files.
14	CICHORIC-ACID	Root	--	--		Jim Duke's personal files.
14	CICHORIC-ACID	Flower	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	CICHORIC-ACID	Shoot	--	--		Jim Duke's personal files.
0	CYANIDIN-3-O-(6-O-MALONYL-BETA-D-GLUCOPYRANOSIDE)	Flower	--	--		
0	CYANIDIN-3-O-(BETA-D-GLYCOPYRANOSIDE)	Flower	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
5	CYANIN	Flower	--	--		Jim Duke's personal files.
0	DODECA-2-TRANS-4-CIS-DIENE-8,10-DIYNOIC-ACID-ISOBUTYLAMIDE	Root	--	--		Jim Duke's personal files.
0	DODECA-2-TRANS-4-CIS-DIENE-8,10-DIYNOIC-ACID-ISOBUTYLAMIDE	Shoot	--	--		Jim Duke's personal files.
0	DODECA-2-TRANS-4-TRANS-10-TRANS-TRIEN-8-YNOIC-ACID-ISOBUTYLAMIDE	Shoot	--	--		Jim Duke's personal files.
0	DODECA-2-TRANS-4-TRANS-8-CIS-10-CIS-TETRAENOIC-ACID-ISOBUTYLAMIDE	Shoot	--	--		Jim Duke's personal files.
0	DODECA-2-TRANS-4-TRANS-8-CIS-10-TETRAENOIC-ACID-ISOBUTYLAMIDE	Shoot	--	--		Jim Duke's personal files.
0	DODECA-2-TRANS-4-TRANS-8-CIS-TRIENOIC-ACID-ISOBUTYLAMIDE	Shoot	--	--		Jim Duke's personal files.
0	DODECA-2-TRANS-4-TRANS-DIENOIC-ACID-ISOBUTYLAMIDE	Shoot	--	--		Jim Duke's personal files.
3	ECHINACEIN	Root	--	10	-1.414213562373095	Jim Duke's personal files.
10	ECHINACOSIDE	Flower	--	--		
10	ECHINACOSIDE	Leaf	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	ECHINACOSIDE	Root	4000	17000	0.7071067811865469	
0	EO	Flower	--	2800	-0.3301042137550042	Jim Duke's personal files.
0	EO	Root	2000	23000	0.42856787742145763	
0	EO	Shoot	500	1000	-0.8604763708555533	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.
0	HEPTADECA-(8Z,11Z)-DIEN-2-ONE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	HEXADECA-2-TRANS-9-CIS-DIENE-12,14-DIYNOIC-ACID-ISOBUTYLAMIDE	Shoot	--	--		Jim Duke's personal files.
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.
0	ISOCHLOROGENIC-ACID-C	Leaf	--	--		Jim Duke's personal files.
0	ISOCHLOROGENIC-ACID-C	Flower	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISOCHLOROGENIC-ACID-C	Root	--	--		Jim Duke's personal files.
0	KETO-ALKENES	Shoot	--	--		
0	KETO-ALKYNES	Shoot	--	--		
0	PENTADEC-1-CIS-8-DIENE	Root Essent. Oil	--	--		Jim Duke's personal files.
0	PENTADEC-1-ENE	Root Essent. Oil	--	--		Jim Duke's personal files.
0	PENTADECA-(8Z)-EN-11,13-DIYN-2-ONE	Root	--	--		
0	PENTADECA-(8Z)-EN-2-ONE	Root	--	4000		
0	PENTADECA-(8Z,11Z)-DIEN-2-ONE	Root	--	--		Economic & Medicinal Plant Research, 5: 253.
0	PENTADECA-(8Z,13Z)-DIEN-11-YN-2-ONE	Root	--	--		Economic & Medicinal Plant Research, 5: 253.
0	PENTADECA-8-CIS-11,13-TRANS-TRIEN-2-ONE	Root	--	--		Jim Duke's personal files.
0	PENTADECA-8-CIS-11-CIS-13-TRANS-TRIEN-2-ONE	Root	--	--		Jim Duke's personal files.
0	PENTADECA-8-CIS-11-CIS-DIEN-2-ONE	Root	--	--		Jim Duke's personal files.
0	PENTADECA-8-CIS-11-TRANS-13-CIS-TRIEN-2-ONE	Root	--	--		Jim Duke's personal files.
0	PENTADECA-8-CIS-13-CIS-DIEN-11-YN-2-ONE	Root	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PENTADECA-8-CIS-ENE-11,13-DIYN-2-ONE	Root	--	--		Jim Duke's personal files.
0	PENTADECA-8-EN-2-ONE	Shoot	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	PENTADECA-8-EN-2-ONE	Root	--	--		Economic & Medicinal Plant Research, 5: 253.
4	RUTOSIDE	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	TETRADECA-(8Z)-EN-11,13-DIYN-2-ONE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	TETRADECA-8-CIS-ENE-11,13-DIYN-2-ONE	Root	--	--		Jim Duke's personal files.
0	TRIDECA-2-TRANS-7-CIS-DIENE-10,12-DIYNOIC-ACID-ISOBUTYLAMIDE	Root	--	--		Jim Duke's personal files.
0	UNDECA-2-CIS-4-TRANS-DIENE-8,10-DIYNOIC-ACID-ISOBUTYLAMIDE	Root	--	--		Jim Duke's personal files.
0	UNDECA-2-TRANS-4-CIS-DIENE-8,10-DIYNOIC-ACID-ISOBUTYLAMIDE	Shoot	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
20	VERBASCOSIDE	Root	--	--		Jim Duke's personal files.
20	VERBASCOSIDE	Plant	--	--		
20	VERBASCOSIDE	Flower	--	--		Jim Duke's personal files.
20	VERBASCOSIDE	Leaf	--	--		Jim Duke's personal files.