

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Tanacetum parthenium*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
39	NIACIN	Plant		285.0	2.918886504988539	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
6	CARYOPHYLLENE-EPOXIDE	Shoot		31.0	1.6391694335729892	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of <i>Tanacetum parthenium</i> (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
23	MELATONIN	Leaf	6.0	3500.0	1.4142114910611014	--
0	BETA-FARNESENE	Root		40.0	1.4074654870795833	--
41	CAMPHOR	Essential Oil		442000.0	1.342251919291669	--
5	ISOFRAXIDIN	Root		122.0	1.0	--
9	CAMPHENE	Essential Oil		54000.0	0.9292841063141826	--
0	ASH	Plant		171000.0	0.9030718561913528	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PROTEIN	Plant		267000.0	0.7665154169276235	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	PHOSPHORUS	Plant		5010.0	0.683008160317236	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	WATER	Plant		895000.0	0.5311464179022468	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
41	CAMPHOR	Leaf Essent. Oil		201000.0	0.40766428831174817	--
0	FAT	Seed		312000.0	0.24552423015523567	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
9	CAMPHENE	Leaf Essent. Oil		30000.0	0.1899278105662218	--
14	POTASSIUM	Plant		22500.0	0.04901058337072094	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	TIN	Plant		21.0	0.00964806037643002	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	FAT	Plant		48000.0	-0.05468700183087534	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PROTEIN	Seed		222000.0	-0.10493212955134139	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
13	BETA-PINENE	Shoot		4.0	-0.12082019397820601	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
9	CAMPHENE	Shoot		95.0	-0.1255113105525119	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
28	ALPHA-PINENE	Shoot		15.0	-0.14595252753743698	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
41	CAMPHOR	Shoot		24.0	-0.15638075587436032	--
23	TERPINEN-4-OL	Shoot		4.0	-0.16552235945768073	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
23	ALPHA-TERPINEOL	Shoot		2.5	-0.2832600201311504	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	ALPHA-THUJENE	Shoot		15.0	-0.2864465102156434	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
5	SABINENE	Shoot		5.0	-0.29059831881924897	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
31	THIAMIN	Plant		4.1	-0.2974931626940486	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	SODIUM	Plant		48.0	-0.3014209590315537	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
10	CUMINALDEHYDE	Shoot		0.0	-0.32576507180696485	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
9	CAMPHENE	Fruit Essent. Oil		7000.0	-0.3352780859890732	--
23	TERPINEN-4-OL	Essential Oil		28000.0	-0.3450735894935254	--
60	SELENIUM	Plant		1.7	-0.3516547080519198	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	ALPHA-TERPINENE	Shoot		45.0	-0.35510895262369646	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
12	BORNYL-ACETATE	Shoot		28.0	-0.36126712188937815	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	ALPHA-THUJENE	Essential Oil		6000.0	-0.36186369670280605	--
2	GERMACRENE-D	Shoot		4.0	-0.36824936936969666	--
11	GAMMA-TERPINENE	Shoot		28.0	-0.3749884139681809	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
16	P-CYMENE	Essential Oil		31000.0	-0.3774568610491117	--
35	BORNEOL	Shoot		9.0	-0.3900888401961888	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BETA-CARYOPHYLLENE	Shoot		8.0	-0.39375252938120847	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	BETA-FARNESENE	Shoot		12.0	-0.39419791087988254	--
0	KILOCALORIES	Plant		2860.0	-0.40616652820501614	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
28	ALPHA-PINENE	Essential Oil		10000.0	-0.47207505752571344	--
11	ALPHA-PHELLANDRENE	Essential Oil		6000.0	-0.4769076636125325	--
16	P-CYMENE	Shoot		9.0	-0.49426810257944204	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
112	ASCORBIC-ACID	Plant		330.0	-0.5162152379862993	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
65	MAGNESIUM	Plant		2400.0	-0.5172740870337147	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	SILICON	Plant		4.6	-0.5184035386753152	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
53	LINALOOL	Essential Oil		13000.0	-0.5248552467846653	--
2	GERMACRENE-D	Leaf Essent. Oil		31000.0	-0.5383216002693361	--
15	FIBER	Plant		143000.0	-0.5900378792839802	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
15	RIBOFLAVIN	Plant		2.5	-0.6210248948087893	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	PINOCARVONE	Shoot		2.0	-0.6307569440575539	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	MANGANESE	Plant		8.1	-0.6368507291246737	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
53	BETA-CAROTENE	Plant		14.0	-0.6513567486971203	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
11	GAMMA-TERPINENE	Essential Oil		10000.0	-0.6855735643465313	--
0	EO	Plant	200.0	700.0	-0.686929830421695	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	BORNEOL-ACETATE	Essential Oil		7000.0	-0.6918807209736767	--
24	CHROMIUM	Plant		1.7	-0.7046051474035722	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
2	THUJOPSENE	Shoot		1.5	-0.7071067811865476	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
60	LIMONENE	Essential Oil		5000.0	-0.7082860385987012	--
5	SABINENE	Fruit Essent. Oil		1000.0	-0.7138066475051742	--
0	ALPHA-THUJENE	Fruit Essent. Oil		2000.0	-0.7397616687333448	--
23	TERPINEN-4-OL	Fruit Essent. Oil		1000.0	-0.7441224268433381	--
5	ALUMINUM	Plant		6.0	-0.7451443685154636	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	BETA-PINENE	Fruit Essent. Oil		1000.0	-0.7715573703107804	--
0	EO	Shoot		1500.0	-0.8141965329475307	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
35	BORNEOL	Essential Oil		10000.0	-0.8168042453042687	--
28	ALPHA-PINENE	Fruit Essent. Oil		2000.0	-0.8225046812392973	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	CALCIUM	Plant		5810.0	-0.8321353407836742	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
16	P-CYMENE	Fruit Essent. Oil		5000.0	-0.9962725072187498	--
9	COSTUNOLIDE	Shoot		6.0	-1.0	--
8	CARYOPHYLLENE-OXIDE	Fruit Essent. Oil		4000.0	-1.0	--
2	GERMACRENE-D	Essential Oil		46000.0	-1.0	--
0	CHRYSANTHENOL	Shoot		2.0	-1.0	--
11	GAMMA-TERPINENE	Fruit Essent. Oil		1000.0	-1.0164567396291118	--
0	CARBOHYDRATES	Plant		514000.0	-1.0198824234248682	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	APIGENIN-7-GLUCOSIDE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	3,4-BETA-EPOXY-8-DEOXYCUMAMBRIN-B	Flower		485.0		--
0	SECOTANAPARTHOLIDE-A	Shoot		0.2		--
3	CYNAROSIDE	Leaf				--
0	(+)-EPOXYARTEMORIN	Leaf				--
0	5-BETA-HYDROXYREYNOSIN	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
35	BORNEOL	Fruit Essent. Oil		1300.0		--
1	REYNOSIN	Plant				--
0	10-EPICANIN	Leaf				--
4	ARTECANIN	Shoot		0.4		--
77	ZINC	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
36	ALANTOLACTONE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	BENZALDEHYDE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	CHRYSANTHENOL-4-ACETATE	Shoot		1.2		--
0	TANETIN	Flower				--
27	PARTHENOLIDE	Leaf	130.0	300000.0		--
0	2-METHYLPENTA-2,4-DIENE	Fruit Essent. Oil		2000.0		--
41	CAMPHOR	Fruit Essent. Oil		189000.0		--
0	SECOTANAPARATHOLIDE	Leaf				--
0	TRANS-SPIROKETAL-ENOL-ETHER	Root Essent. Oil		51000.0		--
1	3-BETA-HYDROXYPARTHENOLIDE	Leaf				--
0	BICYCLOGERMACRENE	Root		4.0		--
0	QUERCETAGETIN-3,7-DIMETHYL-ETHER	Leaf				--
4	ARTECANIN	Leaf				--
0	ALPHA-COPAENE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	9-EPIPECTACHOL	Root		143.0		--
0	CHRYSANTHEMUM-SESQUITERPENE-LACTONE	Leaf				--
0	TANAPARTHIN-PEROXIDE	Leaf				--
27	PARTHENOLIDE	Fruit Essent. Oil		284000.0		--
71	THYMOL	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-(HEXA-2',4'-DIYNYLIDENE)-1,6-TRANS-DIOXASPIRO-(4,5)-DEC-3-ENE	Shoot		0.6		--
76	EUGENOL	Essential Oil				--
0	PARTHOLIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	SANTIN	Plant				--
0	TRANS-SPIROKETAL-ENOL-ETHER	Fruit Essent. Oil		61000.0		--
0	3-BETA-HYDROXYCOSTUNOLIDE	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
47	BETA-SITOSTEROL	Leaf Essent. Oil		16000.0		--
0	QUERCETAGETIN-3,7-DIMETHYL-ETHER	Flower				--
9	COSTUNOLIDE	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	APIGENIN-7-GLUCURONIDE	Leaf				--
67	1,8-CINEOLE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	COSTIC-ACID-METHYL-ESTER	Shoot		0.8		--
0	8-BETA-HYDROXYREYNOSIN	Plant				--
0	ISOAMYL-ISOVALERATE	Fruit Essent. Oil		2000.0		--
0	SECOTANAPARTHENOLID E	Plant				--
0	CHRYSANTHEMUM-PARTHENIUM-EN-YNE-BICLCLO-ETHER	Root		3.0		--
0	TANAPARTHIN-BETA-PEROXIDE	Shoot		4.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	P-METHYL-ISO-PROPENYLBENZENE	Fruit Essent. Oil				--
9	TERPINOLENE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	2-(HEXA-2',4'-DIYNYLIDENE)-1,6-CIS-DIOXASPIRO-(4,5)-DEC-3-ENE	Root		100.0		--
76	EUGENOL	Fruit Essent. Oil		1000.0		--
27	PARTHENOLIDE	Flower	0.0	2424.0		--
3	SANTAMARINE	Flower		424.0		--
0	1-BETA-HYDROXYARBUSCULIN	Leaf				--
47	BETA-SITOSTEROL	Fruit Essent. Oil				--
0	QUERCETAGETIN-3,3',7-TRIMETHYL-ETHER	Leaf				--
4	COSMOSIIN	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CHRYSANTHENYL-PROPIONATE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	CIS-SPIROKETOL-ENOL-ETHER	Root Essent. Oil		575000.0		--
0	TRANS-DENDRANTHEMA-SPIROFURAN-A	Root		2000.0		--
5	CANIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	8-ALPHA-ISOBUTYRYL-OXYESTAFIATIN	Shoot		2.0		--
0	HEXAN-1-AL	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	SANTAMARIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CHRYSANTH-TRANS-ENYL-ACETATE	Essential Oil		235000.0		--
0	TANAPARTHIN-BETA-PEROXIDE	Leaf				--
0	P-METHYLBENZALDEHYDE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	2-(HEXA-2',4'-DIYNYLIDENE)-1,6-CIS-DIOXASPIRO-(4,5)-DEC-3-ENE	Shoot		1.2		--
0	EPOXYSANTAMARINE	Flower		30.0		--
5	SANTAMARIN	Plant				--
13	BETA-PINENE	Essential Oil				--
0	QUERCETAGETIN-3,3',7-TRIMETHYL-ETHER	Flower				--
2	COBALT	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	OCTANOIC-ACID-ETHYL-ESTER	Fruit Essent. Oil		1000.0		--
0	CHRYSANTHENYL-ISOVALERATE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	SECOTANAPARTHOLIDE-A	Leaf				--
0	CIS-DENDRANTHEMA-SPIROFURAN-A	Shoot		8.0		--
0	TRANS-DENDRANTHEMA-SPIROFURAN-A	Shoot		0.6		--
0	GUAIANOLIDES	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	(-)-CAMPHOR	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	8-ALPHA-HYDROXYESTAFIATIN	Shoot		0.4		--
0	HEX-TRANS-2-EN-1-AL	Fruit Essent. Oil				--
5	SANTAMARIN	Flower				--
0	TANAPARTHIN-ALPHA-PEROXIDE	Shoot		1.6		--
0	LINALYL-PROPIONATE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	10-EPICANIN	Shoot		0.4		--
0	EPOXYARTEMORIN	Leaf				--
0	MANGOLIOLIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	BUTYL-BENZENE	Fruit Essent. Oil				--
5	SABINOL	Fruit Essent. Oil		1300.0		--
1	PINOCARVONE	Essential Oil				--
0	CHRYSARTEN-B	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
23	ALPHA-TERPINEOL	Plant				--
22	MYRCENE	Fruit Essent. Oil				--
0	CHRYSANTHENYL-ANGELATE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	TANNINS	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	CIS-CHRYSANTHENOL-ISOVALERATE	Shoot		0.8		--
0	TRANS-CHRYSANTHENOL-ACETATE	Leaf Essent. Oil		47000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GERMACRONOLIDES	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	8-ALPHA-ANGELOYL-OXYESTAFIATIN	Shoot		3.0		--
0	HEX-CIS-3-EN-1-OL	Fruit Essent. Oil				--
31	CARYOPHYLENE	Fruit Essent. Oil				--
0	TANAPARTHIN-ALPHA-PEROXIDE	Leaf				--
60	LIMONENE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	1-BETA-HYDROXYARBUSCULIN	Plant				--
1	ELEUTHEROSIDE-B-1	Shoot				--
2	CHRYSANTHENYL-ACETATE	Shoot		360.0		Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	BORNEOL-ANGELATE	Shoot		0.8		--
0	SABINENE-HYDRATE	Fruit Essent. Oil				--
1	PINOCARVONE	Fruit Essent. Oil		2000.0		--
0	CHRYSARTEN-A	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
13	ALPHA-TERPINENE	Plant				--
0	MICHEFUSCALIDE	Leaf				--
37	CARVACROL	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	TANAPARTHIN-1BETA,4BETA-EPOXIDE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CIS-CHRYSANTHENOL-ANGELATE	Shoot		1.0		--
0	TRANS-CHRYSANTHENOL-ACETATE	Fruit Essent. Oil		155000.0		--
0	GERMACRENE	Plant		14900.0		--
0	BETA-FARNESENE	Essential Oil		8000.0		--
0	L-BORNEOL	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	4-BETA-ACETOXY-CHRYSANTHENONE	Shoot		1.2		--
1	REYNOSIN	Leaf				--
0	CAR-3-ENE	Fruit Essent. Oil				--
0	TANACETIN	Shoot		15800.0		--
0	(-)-EPOXYARTEMORIN	Leaf				--
0	DOCOS-3-ENE	Fruit Essent. Oil		60000.0		--
5	SABINENE	Essential Oil				--
2	ALPHA-HUMULENE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
27	PARTHENOLIDE	Plant				--
0	CHRYSARTHEMIN-B	Plant				--
9	DELTA-CADINENE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	TANAPARTHIN-1ALPHA,4ALPHA-EPOXIDE	Leaf				--
0	CIS-CHRYSANTHENOL-ACETATE	Shoot		1.0		--
9	TERPINOLENE	Plant				--
1	3-BETA-HYDROXYPARTHENOLIDE	Shoot		1.2		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	SABINENE-HYDRATE	Shoot		1.5		Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	PYRETHRIN	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
5	CANIN	Shoot		0.8		--
12	STIGMASTEROL	Fruit Essent. Oil				--
0	PARTHENOLIDES	Plant		9000.0		--
9	DELTA-CADINENE	Essential Oil				--
0	BORNEOL-ACETATE	Fruit Essent. Oil		7000.0		--
0	P-ETHYLBENZALDEHYDE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	CHRYSAARTHENIN-A	Plant				--
0	MAGNOLIALIDE	Plant				--
2	BENZYL-PROPIONATE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	TANAPARTHIN	Leaf				--
0	CIS-CHRYSANTHENOL-ACETATE	Leaf				--
0	BETA-CARYOPHYLLENE	Essential Oil				--
27	PARTHENOLIDE	Seed		15200.0		--
0	3-BETA-HYDROXYCOSTUNOLIDE	Shoot		4.0		--
2	GERMACRENE-D	Tissue Culture				--
5	CANIN	Leaf				--
0	SECOTANAPARTHOLIDE-B	Shoot		0.8		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ORTHOCARISINE	Plant				Tramil
0	DEHYDROSAUSSUREALAC TONE	Fruit Essent. Oil		6000.0		--
6	IRON	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	BORNEOL-ACETATE	Shoot		1.2		--
1	REYNOSIN	Shoot		0.4		--
2	FARNESENE	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	P-CYMENENE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	CHRYSANTHEMOMIN	Leaf				--
3	LUTEOLIN-7-GLUCURONIDE	Leaf				--
1	BENZYL-ISOVALERATE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	TANACETIN	Plant				Tramil
0	CHRYSOERIOL-7-GLUCURONIDE	Leaf				--
9	BENZYL-ALCOHOL	Fruit Essent. Oil				--
27	PARTHENOLIDE	Shoot	80.0	8700.0		--
4	ARTECANIN	Plant				--
0	3-BETA-HYDROXYCOSTUNOLIDE	Leaf				--
0	GERMACRENE-A	Tissue Culture				--
0	SECOTANAPARTHOLIDE-B	Leaf				--
0	D-FRIEDOLEAN-14-EN-3-OL	Root Essent. Oil		53000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	8-BETA-HYDROXYREYNOSIN	Leaf				--
1	REYNOSIN	Flower		1485.0		--
0	EUDESMANOLIDES	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	ARTEMORIN	Shoot		4.0		--
0	CURCUMENE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	8-BETA-REYNOSIN	Plant				J.S. Glasby Dict.Plis Containing 2ndary Metabolite. 1991.
0	CHRYSANTHEMOLIDE	Leaf				--
0	ALPHA-FARNESENE	Fruit Essent. Oil				--
1	BENZYL-ISOBUTYRATE	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
0	CHRYSANTHENOL-4-BETA-HYDROXY	Shoot		3.0		--
0	TANETIN	Leaf				--
0	BENZYL-2-METHYL-BUTYRATE	Fruit Essent. Oil		5000.0		--
27	PARTHENOLIDE	Leaf Essent. Oil		61000.0		--