

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Tanacetum parthenium*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1-BETA-HYDROXYARBUSCULIN	Leaf				--
5	SANTAMARIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	BETA-PINENE	Essential Oil				--
9	TERPINOLENE	Shoot				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.
0	HEX-TRANS-2-EN-1-AL	Fruit Essent. Oil				--
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 <i>Tanacetum parthenium</i> (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
1	PINOCARVONE	Essential Oil				--
0	BUTYL-BENZENE	Fruit Essent. Oil				--
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	TANAPARTHIN-ALPHA-PEROXIDE	Leaf				--
0	SECOTANAPARTHOLIDE-A	Leaf				--
0	GUAIANOLIDES	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	EPOXYARTEMORIN	Leaf				--
0	SABINENE-HYDRATE	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	SANTAMARIN	Flower				--
22	MYRCENE	Fruit Essent. Oil				--
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	MANGOLIOLIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	HEX-CIS-3-EN-1-OL	Fruit Essent. Oil				--
31	CARYOPHYLLENE	Fruit Essent. Oil				--
2	COBALT	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
2	(-)-CAMPHOR	Plant				--
23	ALPHA-TERPINEOL	Plant				--
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	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.
1	ELEUTHEROSIDE-B-1	Shoot				--
5	SABINENE	Essential Oil				--
0	MICHEFUSCALIDE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	CAR-3-ENE	Fruit Essent. Oil				--
0	CHRYSARTEN-B	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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.
9	TERPINOLENE	Plant				--
27	PARTHENOLIDE	Plant				--
0	1-BETA-HYDROXYARBUSCULIN	Plant				--
12	STIGMASTEROL	Fruit Essent. Oil				--
13	ALPHA-TERPINENE	Plant				--
0	TANAPARTHIN-1BETA,4BETA-EPOXIDE	Leaf				--
1	REYNOSIN	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	CHRYSARTEN-A	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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	(-)-EPOXYARTEMORIN	Leaf				--
0	L-BORNEOL	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TANAPARTHIN-1ALPHA,4ALPHA-EPOXIDE	Leaf				--
9	DELTA-CADINENE	Essential Oil				--
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.
0	MAGNOLIALIDE	Plant				--
0	CIS-CHRYSANTHENOL-ACETATE	Leaf				--
0	BETA-CARYOPHYLENE	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.
2	GERMACRENE-D	Tissue Culture				--
5	CANIN	Leaf				--
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	SECOTANAPARTHOLIDE-B	Leaf				--
0	TANAPARTHIN	Leaf				--
3	LUTEOLIN-7-GLUCURONIDE	Leaf				--
0	CHRYSOERIOL-7-GLUCURONIDE	Leaf				--
9	BENZYL-ALCOHOL	Fruit Essent. Oil				--
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	GERMACRENE-A	Tissue Culture				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CHRYSARTHEMIN-A	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	TANETIN	Leaf				--
0	ORTHOCARSINE	Plant				Tramil
6	IRON	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	TANACETIN	Plant				Tramil
0	3-BETA-HYDROXYCOSTUNOLIDE	Leaf				--
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	(+)-EPOXYARTEMORIN	Leaf				--
1	REYNOSIN	Plant				--
0	CHRYSANTHEMOMIN	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	TANETIN	Flower				--
0	8-BETA-REYNOSIN	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	8-BETA-HYDROXYREYNOSIN	Leaf				--
0	SECOTANAPARATHOLIDE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-FARNESENE	Fruit Essent. Oil				--
3	CYNAROSIDE	Leaf				--
4	ARTECANIN	Plant				--
0	EUDESMANOLIDES	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
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	QUERCETAGETIN-3,7-DIMETHYL-ETHER	Leaf				--
0	CHRYSANTHEMOLIDE	Leaf				--
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	TANAPARTHIN-PEROXIDE	Leaf				--
77	ZINC	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
0	SANTIN	Plant				--
36	ALANTOLACTONE	Leaf				--
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	CHRYSANTHEMUM-SESQUITERPENE-LACTONE	Leaf				--
0	10-EPICANIN	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	QUERCETAGETIN-3,7-DIMETHYL-ETHER	Flower				--
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.
4	ARTECANIN	Leaf				--
0	P-METHYL-ISO-PROPENYLBENZENE	Fruit Essent. Oil				--
1	3-BETA-HYDROXYPARTHENOLIDE	Leaf				--
76	EUGENOL	Essential Oil				--
0	PARTHOLIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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	QUERCETAGETIN-3,3',7-TRIMETHYL-ETHER	Leaf				--
0	TANAPARTHIN-BETA-PEROXIDE	Leaf				--
0	APIGENIN-7-GLUCURONIDE	Leaf				--
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.
5	SANTAMARIN	Plant				--
0	8-BETA-HYDROXYREYNOSIN	Plant				--
0	SECOTANAPARTHENOLID E	Plant				--
47	BETA-SITOSTEROL	Fruit Essent. Oil				--
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	HEXAN-1-AL	Fruit Essent. Oil				--
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.
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	QUERCETAGETIN-3,3',7-TRIMETHYL-ETHER	Flower				--
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.
0	SECOTANAPARTHOLIDE-A	Shoot		0.2		--
0	8-ALPHA-HYDROXYESTAFIATIN	Shoot		0.4		--
0	10-EPICANIN	Shoot		0.4		--
1	REYNOSIN	Shoot		0.4		--
4	ARTECANIN	Shoot		0.4		--
0	2-(HEXA-2',4'-DIYNYLIDENE)-1,6-TRANS-DIOXASPIRO-(4,5)-DEC-3-ENE	Shoot		0.6		--
0	TRANS-DENDRANTHEMA-SPIROFURAN-A	Shoot		0.6		--
0	CIS-CHRYSANTHENOL-ISOVALERATE	Shoot		0.8		--
0	BORNEOL-ANGELATE	Shoot		0.8		--
5	CANIN	Shoot		0.8		--
0	SECOTANAPARTHOLIDE-B	Shoot		0.8		--
0	COSTIC-ACID-METHYL-ESTER	Shoot		0.8		--
0	CIS-CHRYSANTHENOL-ANGELATE	Shoot		1.0		--
0	CIS-CHRYSANTHENOL-ACETATE	Shoot		1.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-(HEXA-2',4'-DIYNYLIDENE)-1,6-CIS-DIOXASPIRO-(4,5)-DEC-3-ENE	Shoot		1.2		--
0	4-BETA-ACETOXY-CHRYSANTHENONE	Shoot		1.2		--
1	3-BETA-HYDROXYPARTHENOLIDE	Shoot		1.2		--
0	BORNEOL-ACETATE	Shoot		1.2		--
0	CHRYSANTHENOL-4-ACETATE	Shoot		1.2		--
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.
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.
0	TANAPARTHIN-ALPHA-PEROXIDE	Shoot		1.6		--
24	CHROMIUM	Plant		1.7	-0.7046051474035722	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
60	SELENIUM	Plant		1.7	-0.3516547080519198	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	8-ALPHA-ISOBUTYRYL-OXYESTAFIATIN	Shoot		2.0		--
0	CHRYSANTHENOL	Shoot		2.0	-1.0	--
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.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	RIBOFLAVIN	Plant		2.5	-0.6210248948087893	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	8-ALPHA-ANGELOYL-OXYESTAFIATIN	Shoot		3.0		--
0	CHRYSANTHENOL-4-BETA-HYDROXY	Shoot		3.0		--
0	CHRYSANTHEMUM-PARTHENIUM-EN-YNE-BICLCLO-ETHER	Root		3.0		--
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.
0	3-BETA-HYDROXYCOSTUNOLIDE	Shoot		4.0		--
1	ARTEMORIN	Shoot		4.0		--
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.
0	BICYCLOGERMACRENE	Root		4.0		--
0	TANAPARTHIN-BETA-PEROXIDE	Shoot		4.0		--
2	GERMACRENE-D	Shoot		4.0	-0.36824936936969666	--
31	THIAMIN	Plant		4.1	-0.2974931626940486	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.
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.
9	COSTUNOLIDE	Shoot		6.0	-1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	ALUMINUM	Plant		6.0	-0.7451443685154636	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CIS-DENDRANTHEMA-SPIROFURAN-A	Shoot		8.0		--
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.
14	MANGANESE	Plant		8.1	-0.6368507291246737	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
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.
0	BETA-FARNESENE	Shoot		12.0	-0.39419791087988254	--
53	BETA-CAROTENE	Plant		14.0	-0.6513567486971203	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
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.
4	TIN	Plant		21.0	0.00964806037643002	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
41	CAMPHOR	Shoot		24.0	-0.15638075587436032	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
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	EPOXYSANTAMARINE	Flower		30.0		--
6	CARYOPHYLLENE-EPOXIDE	Shoot		31.0	1.6391694335729892	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	Root		40.0	1.4074654870795833	--
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.
1	SODIUM	Plant		48.0	-0.3014209590315537	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
0	2-(HEXA-2',4'-DIYNYLIDENE)-1,6-CIS-DIOXASPIRO-(4,5)-DEC-3-ENE	Root		100.0		--
5	ISOFRAXIDIN	Root		122.0	1.0	--
0	9-EPIPECTACHOL	Root		143.0		--
39	NIACIN	Plant		285.0	2.918886504988539	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
112	ASCORBIC-ACID	Plant		330.0	-0.5162152379862993	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
3	SANTAMARINE	Flower		424.0		--
0	3,4-BETA-EPOXY-8-DEOXYCUMAMBRIN-B	Flower		485.0		--
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	OCTANOIC-ACID-ETHYL-ESTER	Fruit Essent. Oil		1000.0		--
13	BETA-PINENE	Fruit Essent. Oil		1000.0	-0.7715573703107804	--
5	SABINENE	Fruit Essent. Oil		1000.0	-0.7138066475051742	--
23	TERPINEN-4-OL	Fruit Essent. Oil		1000.0	-0.7441224268433381	--
11	GAMMA-TERPINENE	Fruit Essent. Oil		1000.0	-1.0164567396291118	--
76	EUGENOL	Fruit Essent. Oil		1000.0		--
5	SABINOL	Fruit Essent. Oil		1300.0		--
35	BORNEOL	Fruit Essent. Oil		1300.0		--
1	REYNOSIN	Flower		1485.0		--
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.
0	ALPHA-THUJENE	Fruit Essent. Oil		2000.0	-0.7397616687333448	--
1	PINOCARVONE	Fruit Essent. Oil		2000.0		--
28	ALPHA-PINENE	Fruit Essent. Oil		2000.0	-0.8225046812392973	--
0	2-METHYLPENTA-2,4-DIENE	Fruit Essent. Oil		2000.0		--
0	ISOAMYL-ISOVALERATE	Fruit Essent. Oil		2000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-DENDRANTHEMA-SPIROFURAN-A	Root		2000.0		--
65	MAGNESIUM	Plant		2400.0	-0.5172740870337147	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
27	PARTHENOLIDE	Flower	0.0	2424.0		--
0	KILOCALORIES	Plant		2860.0	-0.40616652820501614	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
23	MELATONIN	Leaf	6.0	3500.0	1.4142114910611014	--
8	CARYOPHYLENE-OXIDE	Fruit Essent. Oil		4000.0	-1.0	--
0	BENZYL-2-METHYL-BUTYRATE	Fruit Essent. Oil		5000.0		--
60	LIMONENE	Essential Oil		5000.0	-0.7082860385987012	--
16	P-CYMENE	Fruit Essent. Oil		5000.0	-0.9962725072187498	--
4	PHOSPHORUS	Plant		5010.0	0.683008160317236	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
28	CALCIUM	Plant		5810.0	-0.8321353407836742	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	ALPHA-THUJENE	Essential Oil		6000.0	-0.36186369670280605	--
0	DEHYDROSAUSSUREALAC TONE	Fruit Essent. Oil		6000.0		--
11	ALPHA-PHELLANDRENE	Essential Oil		6000.0	-0.4769076636125325	--
9	CAMPHENE	Fruit Essent. Oil		7000.0	-0.3352780859890732	--
0	BORNEOL-ACETATE	Essential Oil		7000.0	-0.6918807209736767	--
0	BORNEOL-ACETATE	Fruit Essent. Oil		7000.0		--
0	BETA-FARNESENE	Essential Oil		8000.0		--
27	PARTHENOLIDE	Shoot	80.0	8700.0		--
0	PARTHENOLIDES	Plant		9000.0		--
28	ALPHA-PINENE	Essential Oil		10000.0	-0.47207505752571344	--
35	BORNEOL	Essential Oil		10000.0	-0.8168042453042687	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
11	GAMMA-TERPINENE	Essential Oil		10000.0	-0.6855735643465313	--
53	LINALOOL	Essential Oil		13000.0	-0.5248552467846653	--
0	GERMACRENE	Plant		14900.0		--
27	PARTHENOLIDE	Seed		15200.0		--
0	TANACETIN	Shoot		15800.0		--
47	BETA-SITOSTEROL	Leaf Essent. Oil		16000.0		--
14	POTASSIUM	Plant		22500.0	0.04901058337072094	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
23	TERPINEN-4-OL	Essential Oil		28000.0	-0.3450735894935254	--
9	CAMPHENE	Leaf Essent. Oil		30000.0	0.1899278105662218	--
2	GERMACRENE-D	Leaf Essent. Oil		31000.0	-0.5383216002693361	--
16	P-CYMENE	Essential Oil		31000.0	-0.3774568610491117	--
2	GERMACRENE-D	Essential Oil		46000.0	-1.0	--
0	TRANS-CHRYSANTHENOL-ACETATE	Leaf Essent. Oil		47000.0		--
0	FAT	Plant		48000.0	-0.05468700183087534	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	TRANS-SPIROKETAL-ENOL-ETHER	Root Essent. Oil		51000.0		--
0	D-FRIEDOOLEAN-14-EN-3-OL	Root Essent. Oil		53000.0		--
9	CAMPHENE	Essential Oil		54000.0	0.9292841063141826	--
0	DOCOS-3-ENE	Fruit Essent. Oil		60000.0		--
27	PARTHENOLIDE	Leaf Essent. Oil		61000.0		--
0	TRANS-SPIROKETAL-ENOL-ETHER	Fruit Essent. Oil		61000.0		--
15	FIBER	Plant		143000.0	-0.5900378792839802	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	TRANS-CHRYSANTHENOL-ACETATE	Fruit Essent. Oil		155000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ASH	Plant		171000.0	0.9030718561913528	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
41	CAMPHOR	Fruit Essent. Oil		189000.0		--
41	CAMPHOR	Leaf Essent. Oil		201000.0	0.40766428831174817	--
0	PROTEIN	Seed		222000.0	-0.10493212955134139	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	CHRYSANTH-TRANS-ENYL-ACETATE	Essential Oil		235000.0		--
0	PROTEIN	Plant		267000.0	0.7665154169276235	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
27	PARTHENOLIDE	Fruit Essent. Oil		284000.0		--
27	PARTHENOLIDE	Leaf	130.0	300000.0		--
0	FAT	Seed		312000.0	0.24552423015523567	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
41	CAMPHOR	Essential Oil		442000.0	1.342251919291669	--
0	CARBOHYDRATES	Plant		514000.0	-1.0198824234248682	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CIS-SPIROKETOL-ENOL-ETHER	Root Essent. Oil		575000.0		--
0	WATER	Plant		895000.0	0.5311464179022468	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.