

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Rosmarinus officinalis*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	ZINGIBERENE	Resin, Exudate, Sap				--
77	ZINC	Leaf	9.0	38.0	-0.29356143351875613	USDA's Ag Handbook 8 and sequelae)
77	ZINC	Plant	30.0	38.0	-0.13949874585523866	USDA's Ag Handbook 8 and sequelae)
5	VERBENONE	Shoot				Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
5	VERBENONE	Shoot	155.0	905.0	1.04522130777922	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
5	VERBENONE	Shoot		0.1	-0.2571527321307905	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the <i>Rosmarinus eriocalyx-tomentosus</i> Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
5	VERBENONE	Plant	0.1	905.0	1.3290176470002508	--
5	VERBENONE	Leaf		175.0	0.5258194373028001	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of <i>Rosmarinus officinalis</i> L. from Egypt. Flavour and Fragrance J. 9: 29-33.
5	VERBENONE	Leaf		175.0	0.5258194373028001	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of <i>Rosmarinus officinalis</i> L. from Egypt. Flavour and Fragrance J. 9: 29-33.
5	VERBENONE	Essential Oil		6000.0	1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	VALINE	Leaf	1650.0	5120.0	-2.1230761876031146	USDA's Ag Handbook 8 and sequelae)
89	URSOLIC-ACID	Shoot		20.0	-0.7331878721293699	--
89	URSOLIC-ACID	Plant	28000.0	41000.0	1.1620768107081578	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
89	URSOLIC-ACID	Leaf	28000.0	192000.0	3.917105845150017	--
8	TYROSINE	Leaf	1000.0	3100.0	-1.3626248647151018	USDA's Ag Handbook 8 and sequelae)
29	TRYPTOPHAN	Leaf	510.0	1580.0	-1.4627190244908572	USDA's Ag Handbook 8 and sequelae)
2	TRANS-PINOCARVEOL	Leaf		32.0	-0.5428725743449665	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
2	TRANS-PINOCARVEOL	Leaf		42.0	-0.5006778332885271	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
2	TRANS-PINOCARVEOL	Leaf		32.0	-0.5428725743449665	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
1	TRANS-CARVEOL	Plant	1.0	5.0	-0.6925284585040422	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	TRANS-ANETHOLE	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	TOLUENE	Plant	436.0	2071.0	1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
71	THYMOL	Shoot Essent. Oil		9000.0	-0.49096416476513904	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
71	THYMOL	Plant				--
17	THUJONE	Resin, Exudate, Sap				--
4	THREONINE	Leaf	1360.0	4220.0	-1.8672306719875797	USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Plant	5.0	6.0	-0.13599687437442232	USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Leaf	3.0	6.0	-0.4802995853174522	USDA's Ag Handbook 8 and sequelae)
9	TERPINOLENE	Resin, Exudate, Sap				--
9	TERPINOLENE	Leaf Essent. Oil		3000.0	-0.49764555396661486	--
9	TERPINOLENE	Shoot	25.0	65.0	1.0715722256541234	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
9	TERPINOLENE	Shoot	19.0	65.0	1.0715722256541234	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
9	TERPINOLENE	Shoot		9.0	-0.5458952847671948	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
9	TERPINOLENE	Plant	12.0	350.0	2.3514858768394373	--
23	TERPINEN-4-OL	Plant	4.0	521.0	-0.05451922123183026	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
23	TERPINEN-4-OL	Leaf		40.0	-0.3174828930218612	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
23	TERPINEN-4-OL	Shoot Essent. Oil		36300.0	-0.7721971735984355	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
23	TERPINEN-4-OL	Leaf		40.0	-0.3174828930218612	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavor and Fragrance J. 9: 29-33.
23	TERPINEN-4-OL	Leaf Essent. Oil		1000.0	-0.5406868834711872	--
23	TERPINEN-4-OL	Resin, Exudate, Sap				--
23	TERPINEN-4-OL	Essential Oil	40000.0	68000.0	0.04360237655488514	--
23	TERPINEN-4-OL	Shoot	60.0	190.0	-0.08842230683130393	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
23	TERPINEN-4-OL	Shoot	25.0	240.0	-0.06769648623281556	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
23	TERPINEN-4-OL	Shoot		18.0	-0.159719129690104	Tucker, A. O. and Maciarelllo, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
2	TARAXASTEROL	Shoot		2.0		--
35	TANNIN	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	STYRENE	Resin, Exudate, Sap				--
12	STIGMASTEROL	Shoot	50.0	700.0	1.0	--
8	STEARIC-ACID	Leaf	2310.0	7165.0	4.046790825325211	USDA's Ag Handbook 8 and sequelae)
10	SQUALENE	Plant				--
1	SODIUM	Leaf	260.0	805.0	-0.5043113633571763	USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Plant	462.0	592.0	-0.2713071343792208	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	SINENSETIN	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
1	SERINE	Leaf	1290.0	4000.0	-1.5314566366044275	USDA's Ag Handbook 8 and sequelae)
7	SALICYLATES	Leaf	70.0	680.0	0.9029335850598277	--
29	SAFROLE	Plant	32.0	95.0	-1.4038812701094596	--
5	SABINENE	Shoot	19.0	75.0	-0.21606587909824357	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
5	SABINENE	Shoot		4.0	-0.29166306795812047	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
5	SABINENE	Plant	0.1	190.0	-0.3161195945060451	--
5	SABINENE	Resin, Exudate, Sap				--
5	SABINENE	Shoot Essent. Oil		4400.0	-0.6166885160539565	--
5	SABINENE	Leaf Essent. Oil				--
5	SABINENE	Shoot				Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
2	ROSMARIQUINONE	Plant				Stitt, Paul. Why George should eat broccoli.
2	ROSMARIQUINONE	Leaf				--
57	ROSMARINIC-ACID	Tissue Culture		38957.0		--
57	ROSMARINIC-ACID	Shoot		13500.0	-0.2218024185144439	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
57	ROSMARINIC-ACID	Plant		25000.0	-0.20483756339875825	--
57	ROSMARINIC-ACID	Leaf		3500.0	-0.5431262472392765	--
57	ROSMARINIC-ACID	Inflorescence	25000.0	43000.0	0.3023882331879371	--
2	ROSMARIDIPHENOL	Plant				Stitt, Paul. Why George should eat broccoli.
2	ROSMARIDIPHENOL	Leaf				--
5	ROSMANOL	Leaf	16.0	92.0		--
1	ROSMADIAL	Leaf		30.0		--
15	RIBOFLAVIN	Plant	1.5	5.0	-0.44680999032447544	USDA's Ag Handbook 8 and sequelae)
4	PUFA	Leaf	9140.0	28360.0	1.2060335806311215	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Plant	8842.0	11284.0	-0.7331834369804888	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Leaf	6680.0	20725.0	-0.42475693197095393	USDA's Ag Handbook 8 and sequelae)
7	PIPERITONE	Shoot Essent. Oil		7600.0	-1.0	--
3	PIPERITENONE	Leaf		4.0	-0.8040717230312268	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
3	PIPERITENONE	Leaf		8.0	-0.8006450376571325	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
3	PIPERITENONE	Leaf		4.0	-0.8040717230312268	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
12	PINENE	Essential Oil		214000.0	1.0	--
2	PHYTOSTEROLS	Plant	440.0	1365.0	0.3637682970777659	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	PHOSPHORUS	Plant	490.0	2050.0	-0.7393816155319108	USDA's Ag Handbook 8 and sequelae)
7	PHENYLALANINE	Leaf	1690.0	5245.0	-1.2984546596026252	USDA's Ag Handbook 8 and sequelae)
24	PECTIN	Shoot				--
11	PANTOTHENIC-ACID	Leaf	8.0	25.0	-0.27435519903951683	USDA's Ag Handbook 8 and sequelae)
2	PALMITOLEIC-ACID	Leaf	660.0	2050.0	2.730912274486039	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Leaf	19210.0	59600.0	0.7690832940819118	USDA's Ag Handbook 8 and sequelae)
16	P-CYMENE	Leaf		25.0	-0.37934356798772423	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
16	P-CYMENE	Shoot Essent. Oil		105000.0	0.8884726463111513	--
16	P-CYMENE	Resin, Exudate, Sap				--
16	P-CYMENE	Leaf Essent. Oil		19000.0	-0.4963398028674626	--
16	P-CYMENE	Essential Oil		50000.0	-0.22059304446605782	--
16	P-CYMENE	Shoot	190.0	480.0	-0.12089328222793702	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
16	P-CYMENE	Shoot		6.0	-0.4966462861485599	Tucker, A. O. and Maciarelllo, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
16	P-CYMENE	Shoot	100.0	465.0	-0.13278420007352634	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
16	P-CYMENE	Plant	25.0	950.0	-0.17295799316167934	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	P-CYMENE	Leaf		25.0	-0.37934356798772423	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
18	OLEIC-ACID	Leaf	10240.0	31770.0	3.8781338681899733	USDA's Ag Handbook 8 and sequelae)
64	OLEANOLIC-ACID	Shoot		20.0	1.0279924897351953	--
64	OLEANOLIC-ACID	Plant		10500.0	1.9122846257333326	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	OCTANOIC-ACID	Resin, Exudate, Sap				--
39	NIACIN	Plant	10.0	11.0	-0.9209353845164209	USDA's Ag Handbook 8 and sequelae)
39	NIACIN	Leaf	9.0	30.0	-0.8210516327096217	USDA's Ag Handbook 8 and sequelae)
10	NEROL	Shoot		0.0	-0.3182776163323897	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
10	NEPETRIN	Plant				--
4	NEPETIN	Plant				--
2	NEO-CHLOROGENIC-ACID	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
2	MYRTENOL	Plant	8.0	38.0	1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	MYRISTIC-ACID	Leaf	1210.0	3755.0	1.8995312847931554	USDA's Ag Handbook 8 and sequelae)
22	MYRCENE	Shoot				Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	MYRCENE	Shoot		20.0	-0.3195114179355978	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
22	MYRCENE	Plant	0.1	5605.0	5.681865313894507	--
22	MYRCENE	Leaf		7.0	-0.1701495776094221	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
22	MYRCENE	Resin, Exudate, Sap				--
22	MYRCENE	Leaf		7.0	-0.1701495776094221	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
22	MYRCENE	Shoot Essent. Oil		3800.0	-0.6135160435733102	--
22	MYRCENE	Leaf Essent. Oil		14000.0	-0.31228842453179745	--
22	MYRCENE	Essential Oil	179000.0	295000.0	3.424012020787341	--
22	MYRCENE	Shoot	50.0	100.0	-0.22820195968704796	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
13	MUFA	Leaf	11600.0	35990.0	2.7689135561729756	USDA's Ag Handbook 8 and sequelae)
20	METHYL-EUGENOL	Shoot		0.54	-0.5923297925673616	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
20	METHYL-EUGENOL	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	METHIONINE	Leaf	470.0	1460.0	-1.3521813230101367	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	MANGANESE	Plant	18.0	19.0	-0.5587284001158601	USDA's Ag Handbook 8 and sequelae)
14	MANGANESE	Leaf	10.0	30.0	-0.4100121305716282	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Plant	2142.0	2483.0	-0.49150806235597344	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Leaf	910.0	2825.0	-0.5022614414063324	USDA's Ag Handbook 8 and sequelae)
4	LYSINE	Leaf	1430.0	4435.0	-1.91999880714723	USDA's Ag Handbook 8 and sequelae)
7	LUTEOLIN-7-GLUCOSIDE	Plant				--
1	LUTEOLIN-3'-O-(4''-O-ACETYL)-BETA-D-GLUCURONIDE	Leaf		235.0		--
1	LUTEOLIN-3'-O-(3''-O-ACETYL)-BETA-D-GLUCURONIDE	Leaf		144.0		--
78	LUTEOLIN	Plant				--
78	LUTEOLIN	Leaf				Phytochemistry, 37: 1463.
21	LUPEOL	Shoot		2.4		--
27	LINOLEIC-ACID	Leaf	4470.0	13870.0	0.9616125776478976	USDA's Ag Handbook 8 and sequelae)
7	LINALYL-ACETATE	Shoot		4.0	-0.33787059889501075	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
53	LINALOOL	Leaf Essent. Oil		12000.0	-0.6198630819228325	--
53	LINALOOL	Resin, Exudate, Sap				--
53	LINALOOL	Essential Oil		4000.0	-0.5652093594549852	--
53	LINALOOL	Shoot		65.0	-0.2184175000153399	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
53	LINALOOL	Plant	0.1	585.0	-0.5851760824793115	--
60	LIMONENE	Shoot Essent. Oil		8200.0	-0.8496388001809575	--
60	LIMONENE	Resin, Exudate, Sap				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Shoot	175.0	365.0	-0.14263599643227207	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
60	LIMONENE	Leaf Essent. Oil		23000.0	-0.5765559606907152	--
60	LIMONENE	Shoot	185.0	530.0	-0.058642900438694794	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
60	LIMONENE	Essential Oil		46000.0	-0.4722952157293057	--
60	LIMONENE	Shoot		9.0	-0.3238574641517479	Tucker, A. O. and Maciarelllo, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
60	LIMONENE	Plant	0.0	1950.0	0.7126407219327489	--
60	LIMONENE	Leaf		100.0	-0.34258415038200146	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
60	LIMONENE	Leaf		100.0	-0.34258415038200146	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
2	LEUCINE	Leaf	2490.0	7725.0	-1.353434147748554	USDA's Ag Handbook 8 and sequelae)
7	LAURIC-ACID	Leaf	140.0	435.0	0.057251035280278986	USDA's Ag Handbook 8 and sequelae)
1	LABIATIC-ACID	Plant				--
1	ISOROSMANOL	Leaf		17.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	ISOROSMANOL	Flower		17.0		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
3	ISOPULEGOL	Plant	4.0	19.0	-0.6976369302046033	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	ISOLEUCINE	Leaf	1360.0	4220.0	-2.0207083020277814	USDA's Ag Handbook 8 and sequelae)
3	ISOBUTYL-ACETATE	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
2	ISOBORNYL-ACETATE	Shoot		3.0	-1.0	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
2	ISOBORNYL-ACETATE	Plant				Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
7	ISOBORNEOL	Shoot		10.0	-0.6992413073631504	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
7	ISOBORNEOL	Plant	7.0	95.0	1.6652751280418299	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	IRON	Plant	220.0	400.0	-0.2672486162776693	--
6	IRON	Leaf	65.0	400.0	0.09331686889519585	USDA's Ag Handbook 8 and sequelae)
7	HISTIDINE	Leaf	660.0	2050.0	-1.669327249373123	USDA's Ag Handbook 8 and sequelae)
2	HISPIDULOSIDE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	HISPIDULIN	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
31	HESPERIDIN	Leaf		160.0	-1.4142135623730951	--
4	GLYCOLIC-ACID	Plant				--
12	GLYCINE	Leaf	1590.0	4935.0	-1.4556508695098707	USDA's Ag Handbook 8 and sequelae)
8	GLUTAMIC-ACID	Leaf	3610.0	11200.0	-1.4449537951023277	USDA's Ag Handbook 8 and sequelae)
35	GERANIOL	Plant	50.0	370.0	-0.386079758050379	J. Ethnopharmacology, 39: 167.
35	GERANIOL	Shoot		0.5	-0.5091066559533722	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
35	GERANIOL	Resin, Exudate, Sap				--
3	GENKWANIN	Leaf				--
11	GAMMA-TERPINENE	Resin, Exudate, Sap				--
11	GAMMA-TERPINENE	Shoot Essent. Oil		15200.0	-1.0	--
11	GAMMA-TERPINENE	Shoot	105.0	300.0	-0.18705418029621768	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
11	GAMMA-TERPINENE	Leaf Essent. Oil		6000.0	-0.6461489670114838	--
11	GAMMA-TERPINENE	Shoot	37.0	225.0	-0.23887428149253107	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	GAMMA-TERPINENE	Shoot	37.0	225.0	-0.23887428149253107	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
11	GAMMA-TERPINENE	Plant	4.0	400.0	-0.3712853066248845	--
11	GAMMA-TERPINENE	Leaf		4.0	-0.3642106646413995	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
11	GAMMA-TERPINENE	Leaf		4.0	-0.3642106646413995	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
26	FLAVONE	Leaf				--
15	FIBER	Plant	165420.0	206338.0	-0.12175689933639762	USDA's Ag Handbook 8 and sequelae)
15	FIBER	Leaf	141000.0	437480.0	3.412377345021209	USDA's Ag Handbook 8 and sequelae)
6	FENCHONE	Plant		250.0	1.9981089850478708	--
5	EUGENOL-METHYL-ETHER	Leaf		5.0	-0.6690525606401523	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
5	EUGENOL-METHYL-ETHER	Leaf		7.0	-0.6682004453007676	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	EUGENOL-METHYL-ETHER	Leaf		5.0	-0.6690525606401523	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
76	EUGENOL	Shoot		0.5	-0.4928905950247854	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
24	ETHANOL	Resin, Exudate, Sap				--
24	ETHANOL	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	ELEMOL	Plant	7.0	32.0	-0.40950982015523396	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	DIPENTENE	Essential Oil				--
34	DIOSMIN	Leaf				--
13	DIOSMETIN	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
4	DELTA-TOCOPHEROL	Leaf				--
9	DELTA-CADINENE	Leaf		9.0	-0.4249042148056453	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
9	DELTA-CADINENE	Leaf		9.0	-0.4249042148056453	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	DELTA-CADINENE	Shoot		75.0	0.30150054962345607	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
9	DELTA-CADINENE	Resin, Exudate, Sap				--
9	DELTA-CADINENE	Shoot		38.0	-0.07527677723146986	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
9	DELTA-CADINENE	Shoot	0.1	75.0	0.30150054962345607	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
9	DELTA-CADINENE	Plant	0.1	75.0	-0.02966515133236494	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
8	DELTA-3-CARENE	Shoot		13.0	-0.17221505568266005	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	DELTA-3-CARENE	Shoot				Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
8	DELTA-3-CARENE	Shoot		0.54	-0.30573250687175385	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
8	DELTA-3-CARENE	Plant	0.1	330.0	0.6568103606850512	--
19	D-LIMONENE	Essential Oil		4000.0	-1.2460381869286639	--
2	CYSTINE	Leaf	370.0	1150.0	-1.4883975986960907	USDA's Ag Handbook 8 and sequelae)
12	COPPER	Leaf	3.0	19.0	-0.23824503635463365	USDA's Ag Handbook 8 and sequelae)
12	COPPER	Plant	5.0	6.0	-0.8877762155435414	USDA's Ag Handbook 8 and sequelae)
9	CIRSIMARITIN	Shoot		16.0	-1.0	--
1	CHOLESTEROL	Shoot		6.0		--
77	CHLOROGENIC-ACID	Shoot				--
77	CHLOROGENIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
8	CARYOPHYLLENE-OXIDE	Shoot	0.1	38.0	-0.3159357654555579	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
8	CARYOPHYLLENE-OXIDE	Plant	0.1	75.0	-0.27368108946552483	--
8	CARYOPHYLLENE-OXIDE	Leaf		18.0	-0.3781728702778057	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	CARYOPHYLLENE-OXIDE	Leaf		18.0	-0.3781728702778057	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
8	CARYOPHYLLENE-OXIDE	Shoot		38.0	-0.3159357654555579	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
8	CARYOPHYLLENE-OXIDE	Shoot	12.0	75.0	-0.2347984467940687	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
31	CARYOPHYLLENE	Plant	16.0	340.0	-0.12590614084032536	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
19	CARVONE	Plant	16.0	760.0	-0.2993394259969154	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
19	CARVONE	Leaf		23.0	-0.27814264544072154	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
19	CARVONE	Leaf		23.0	-0.27814264544072154	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
37	CARVACROL	Plant				--
37	CARVACROL	Leaf		5.0	-0.5882708994072298	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
37	CARVACROL	Leaf		6.0	-0.5866456396390065	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
37	CARVACROL	Leaf	5.0	6.0	-0.5866456396390065	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
37	CARVACROL	Shoot Essent. Oil		17300.0	-0.6928503483209176	--
7	CARNOSOLIC-ACID	Leaf				--
20	CARNOSOL	Shoot				Pearson, D. A., Frankel, E. N., Aeschbach, R., German, J. B. 1997. Inhibition of Endothelial Cell-Mediated Oxidation of Low-Density Lipoprotein by Rosemary and Plant Phenolics. J. Agri. & Food Chemistry, 45(3): 578-582.
20	CARNOSOL	Leaf	530.0	46000.0	1.7312833183134486	--
2	CARNOSIC-ACID	Leaf	548.4	5000.0	0.11726849611108531	--
2	CARNOSIC-ACID	Plant				--
1	CAPROIC-ACID	Resin, Exudate, Sap				--
3	CAPRIC-ACID	Leaf	190.0	590.0	1.0	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
41	CAMPHOR	Shoot	1885.0	3920.0	-0.009976007342779595	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
41	CAMPHOR	Shoot	320.0	1410.0	-0.10429734174069223	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
41	CAMPHOR	Shoot		1030.0	-0.11857706567344393	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
41	CAMPHOR	Leaf Essent. Oil		121000.0	-0.08961362373307821	--
41	CAMPHOR	Plant	60.0	5800.0	2.293377121920263	--
41	CAMPHOR	Shoot Essent. Oil		76300.0	1.0	--
41	CAMPHOR	Leaf		160.0	-0.2453152521372931	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
41	CAMPHOR	Resin, Exudate, Sap				--
41	CAMPHOR	Leaf		595.0	-0.23556365657178782	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
41	CAMPHOR	Essential Oil	18000.0	93000.0	-0.6926999479228944	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	CAMPHENE	Shoot	1035.0	2280.0	0.07608391021702815	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
9	CAMPHENE	Resin, Exudate, Sap				--
9	CAMPHENE	Shoot	355.0	1435.0	-0.0018785435817184589	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
9	CAMPHENE	Shoot Essent. Oil		38100.0	1.6759881269456052	--
9	CAMPHENE	Shoot		335.0	-0.1033681284084892	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
9	CAMPHENE	Leaf Essent. Oil		85000.0	2.146113125386858	--
9	CAMPHENE	Plant	23.0	2350.0	3.414039648428031	--
9	CAMPHENE	Essential Oil	40000.0	106000.0	2.4924380801760044	--
9	CAMPHENE	Leaf		23.0	-0.18399918154181208	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
9	CAMPHENE	Leaf		23.0	-0.18399918154181208	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
2	CAMPESTEROL	Shoot	10.0	16.0	-1.0	--
28	CALCIUM	Plant	3170.0	16150.0	0.2738994850321915	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
102	CAFFEIC-ACID	Shoot				--
102	CAFFEIC-ACID	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
4	BORON	Plant	22.0	39.0	-0.4161725383660909	Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages. Includes Internat. Z. Vit. Ern. Forschung 43:1973 (boron).
12	BORNYL-ACETATE	Shoot	70.0	175.0	-0.11715337786974139	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
12	BORNYL-ACETATE	Shoot		90.0	-0.2583075835953817	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
12	BORNYL-ACETATE	Shoot		195.0	-0.08394062358135544	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
12	BORNYL-ACETATE	Plant	0.1	5054.0	2.7627398976776254	--
12	BORNYL-ACETATE	Leaf		105.0	-0.35270090949472066	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
12	BORNYL-ACETATE	Leaf		105.0	-0.35270090949472066	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
35	BORNEOL	Leaf		24.0	-0.44580359587567375	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
35	BORNEOL	Shoot Essent. Oil		175000.0	1.4110728681925218	--
35	BORNEOL	Leaf Essent. Oil		47000.0	-0.04262331152833271	--
35	BORNEOL	Shoot	145.0	895.0	0.4666492247534293	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
35	BORNEOL	Resin, Exudate, Sap				--
35	BORNEOL	Shoot	100.0	1020.0	0.5875208479122355	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
35	BORNEOL	Essential Oil	21000.0	223000.0	1.290576148792746	--
35	BORNEOL	Shoot		180.0	-0.22473645971494194	Tucker, A. O. and Maciarelllo, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
35	BORNEOL	Plant	12.0	4237.0	3.157950276326836	--
35	BORNEOL	Leaf		24.0	-0.44580359587567375	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
22	BETULINIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETULIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	BETULIN	Shoot		12.1	-0.6112769841205962	--
5	BETA-THUJONE	Plant	11.0	209.0	-0.5418571305900116	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
5	BETA-THUJONE	Leaf		13.0	-0.5848576926513763	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
5	BETA-THUJONE	Leaf		13.0	-0.5848576926513763	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
5	BETA-THUJONE	Shoot		1.0	-0.31789996136487986	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
47	BETA-SITOSTEROL	Plant	520.0	550.0	0.01771498305724803	--
13	BETA-PINENE	Leaf		17.0	-0.40405480500606267	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
13	BETA-PINENE	Resin, Exudate, Sap				--
13	BETA-PINENE	Shoot Essent. Oil		4400.0	-0.4055574998009149	--
13	BETA-PINENE	Leaf Essent. Oil		21000.0	-0.012734377596635897	--
13	BETA-PINENE	Essential Oil	34000.0	85000.0	1.1569843346128765	--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETA-PINENE	Shoot	75.0	200.0	-0.1070907839627201	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
13	BETA-PINENE	Shoot	135.0	530.0	-0.08397494056929995	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
13	BETA-PINENE	Shoot		285.0	-0.10113670308865734	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
13	BETA-PINENE	Plant	17.0	1425.0	1.10313470081686	--
13	BETA-PINENE	Leaf		17.0	-0.40405480500606267	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
3	BETA-PHELLANDRENE	Plant				--
3	BETA-PHELLANDRENE	Leaf Essent. Oil				--
5	BETA-ELEMENE	Shoot	3.0	200.0	0.33839525785377406	Bandoni, A.L., Mizrahi, I., and Juarez, M.A. 1991. The Essential Oil of Rosmarinus officinalis Growing in Argentina. J. Ess. Oil Res., 3: 11.
5	BETA-ELEMENE	Resin, Exudate, Sap				--
53	BETA-CAROTENE	Plant	19.0	21.0	-0.6134455252260276	--
53	BETA-CAROTENE	Leaf	15.0	55.0	-0.8984170900936875	USDA's Ag Handbook 8 and sequelae)
9	BETA-AMYRIN	Shoot		13.0		--
9	BETA-AMYRIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	BENZYL-ALCOHOL	Plant	7.0	32.0	1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	ASPARTIC-ACID	Leaf	3910.0	12130.0	-0.9406377119029301	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Plant	612.0	673.0	-0.4356928511976825	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Leaf	11.0	675.0	-0.3812886982384174	USDA's Ag Handbook 8 and sequelae)
14	ARGININE	Plant	1530.0	4745.0	-1.1616107572945837	USDA's Ag Handbook 8 and sequelae)
3	AR-CURCUMENE	Plant	8.0	38.0	-0.3223991657907058	--
101	APIGENIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
32	ALPHA-TOCOPHEROL	Leaf				--
6	ALPHA-THUJONE	Plant	84.0	399.0	0.027761264926608933	--
23	ALPHA-TERPINEOL	Shoot		48.0	-0.23634614318342884	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
23	ALPHA-TERPINEOL	Plant	24.0	1555.0	0.7230158138601487	--
23	ALPHA-TERPINEOL	Leaf		70.0	-0.4673712315037548	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
23	ALPHA-TERPINEOL	Leaf		70.0	-0.4673712315037548	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
23	ALPHA-TERPINEOL	Shoot Essent. Oil		8300.0	-0.8748177652797063	--
23	ALPHA-TERPINEOL	Leaf Essent. Oil		24000.0	-0.3797351297049885	--
23	ALPHA-TERPINEOL	Essential Oil		6000.0	-0.507329957387113	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
23	ALPHA-TERPINEOL	Shoot	130.0	1160.0	0.9102083879345134	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
23	ALPHA-TERPINEOL	Shoot	25.0	290.0	0.013173817725331886	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
13	ALPHA-TERPINENE	Leaf Essent. Oil		3000.0	-0.48864658829747176	--
13	ALPHA-TERPINENE	Shoot	200.0	540.0	1.0320888554231715	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
13	ALPHA-TERPINENE	Shoot	185.0	555.0	1.074125152636713	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
13	ALPHA-TERPINENE	Shoot		5.0	-0.46720574519314034	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
13	ALPHA-TERPINENE	Plant	4.0	555.0	0.33477249389463415	--
13	ALPHA-TERPINENE	Leaf		4.0	-0.3102953993005394	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
13	ALPHA-TERPINENE	Resin, Exudate, Sap				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	ALPHA-TERPINENE	Leaf		4.0	-0.3102953993005394	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
13	ALPHA-TERPINENE	Shoot Essent. Oil		32900.0	1.5953724799280489	--
3	ALPHA-SELINENE	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	ALPHA-PINENE	Essential Oil	79000.0	250000.0	1.6397978991812734	--
28	ALPHA-PINENE	Shoot	990.0	2180.0	0.0699671282541998	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
28	ALPHA-PINENE	Shoot	1080.0	3000.0	0.15174732120992368	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
28	ALPHA-PINENE	Shoot		565.0	-0.09109995909152464	Tucker, A. O. and Maciarelllo, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
28	ALPHA-PINENE	Plant	34.0	7225.0	4.631569388933519	--
28	ALPHA-PINENE	Leaf		34.0	-0.22233708878144057	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	ALPHA-PINENE	Leaf		34.0	-0.22233708878144057	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
28	ALPHA-PINENE	Resin, Exudate, Sap				--
28	ALPHA-PINENE	Shoot Essent. Oil		4400.0	-0.7390731531173163	--
28	ALPHA-PINENE	Leaf Essent. Oil		276000.0	0.7651977457562714	--
11	ALPHA-PHELLANDRENE	Leaf		6.0	-0.310066323626633	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
11	ALPHA-PHELLANDRENE	Resin, Exudate, Sap				--
11	ALPHA-PHELLANDRENE	Leaf		6.0	-0.310066323626633	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
11	ALPHA-PHELLANDRENE	Shoot Essent. Oil		3800.0	-0.7008088432805002	--
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil		1000.0	-0.8574494059207024	--
11	ALPHA-PHELLANDRENE	Shoot	19.0	50.0	-0.18238371083023522	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
11	ALPHA-PHELLANDRENE	Shoot	50.0	125.0	0.008062862694196265	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	ALPHA-PHELLANDRENE	Shoot		50.0	-0.18238371083023522	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
11	ALPHA-PHELLANDRENE	Plant	0.1	133.0	-0.24260862822033083	--
2	ALPHA-HUMULENE	Shoot	12.0	50.0	0.060773186015391556	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
2	ALPHA-HUMULENE	Shoot		13.0	-0.2977983025967326	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
2	ALPHA-HUMULENE	Shoot	19.0	38.0	-0.05552026975070278	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
2	ALPHA-HUMULENE	Shoot		42.0	-0.016755784495338003	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
2	ALPHA-HUMULENE	Leaf		12.0	-0.4476925936768922	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
2	ALPHA-HUMULENE	Leaf		12.0	-0.4476925936768922	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ALPHA-HUMULENE	Shoot Essent. Oil		2500.0	-1.3406010876261014	--
10	ALPHA-AMYRIN	Shoot		13.0		--
10	ALPHA-AMYRIN	Plant				--
3	ALANINE	Leaf	1720.0	5335.0	-1.688888835822415	USDA's Ag Handbook 8 and sequelae)
16	ACETIC-ACID	Resin, Exudate, Sap				--
2	3-OCTANOL	Plant	4.0	19.0	-0.6136125750525936	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	3-O-ACETYLOLEANOLIC-ACID	Shoot	11.0	640.0		--
67	1,8-CINEOLE	Shoot	630.0	1360.0	-0.11609376245322109	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
67	1,8-CINEOLE	Shoot	795.0	2960.0	-0.09314705764762783	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
67	1,8-CINEOLE	Shoot		2250.0	-0.10332965790510984	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
67	1,8-CINEOLE	Plant	0.0	8125.0	1.7189523175721406	--
67	1,8-CINEOLE	Leaf		0.0	-0.5302244920734527	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
67	1,8-CINEOLE	Leaf		0.0	-0.5302244920734527	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.