

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in Pinus sylvestris**

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-1,2-DEHYDROPINIDINOL	Plant	--	--		
0	(+)-ALPHA-PINENE	Leaf	--	--		
0	(+)-BETA-PINENE	Leaf	--	--		
0	(+)-CAMPHENE	Leaf	--	--		
0	(+)-CAR-3-ENE	Leaf Essent. Oil	--	--		
30	(+)-CATECHIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
30	(+)-CATECHIN	Leaf	--	--		
30	(+)-CATECHIN	Bark	--	--		
7	(+)-GALLOCATECHIN	Leaf	--	--		
0	(+)-LIMONENE	Leaf	--	--		
0	(+)-PINIFOLIC-ACID	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	(-)-ALPHA-CADINOL	Stem Essent. Oil	--	--		
0	(-)-ALPHA-PINENE	Leaf	--	--		
0	(-)-BETA-PINENE	Leaf	--	--		
0	(-)-CAMPHENE	Leaf	--	--		
38	(-)-EPICATECHIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	(-)-LIMONENE	Leaf	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(-)-T-MUUROLOL	Stem Essent. Oil	--	--		
0	1,2-DEHYDROPINIDINONE	Plant	--	--		
67	1,8-CINEOLE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	1-4-CINEOL	Leaf Essent. Oil	--	--		
0	10,16-DIHYDROXY-HEXADECANOIC-ACID	Pollen Or Spore	--	--		
0	12-HYDROXYABIETIC-ACID	Shoot	--	--		
0	12-HYDROXYABIETIC-ACID-METHYL-ESTER	Shoot	--	--		
0	12-OXOABIETIC-ACID	Shoot	--	--		
0	13-OXOPODOCARP-8-ENOIC-ACID	Leaf	--	--		
0	18-ACETOXY-ANTICOPALIC-ACID	Leaf	--	--		
0	18-ACETOXY-ANTICOPALIC-ACID	Shoot	--	--		
0	18-NORDEHYDROABIET-4(19)-ENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	18-NORDEHYDROABIETAN-4-ALPHA-OL	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	18-NORDEHYDROYABIET-4-ALPHA-OL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	18-NORPIMARA-8,15-DIEN-4-ALPHA-OL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	19-NORISOPIMARA-8,14,15-DIEN-3-ONE	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	19-NORPIMARA-8(14),15-DIEN-3-ONE	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	2-(4-GLUCOSYL-OXY-3-METHOXY-PHENYL)-7-HYDROXY-3-HYDROXY-METHYL-5-(3-HYDROXY-PROPYL)-BENZOFURAN	Leaf	--	--		
0	2-(4-RHAMNOSYL-OXY-3-METHOXY-PHENYL)-7-HYDROXY-3-HYDROXY-METHYL-5-(3-HYDROXY-PROPYL)-BENZOFURAN	Leaf	--	--		
0	3,7,7-TRIMETHYL-CYCLOHEPTA-1,3,5-TRIEN	Resin, Exudate, Sap	--	7000		
0	3-GLUCOSYL-OXY-2-(2-HYDROXY-4-(3-HYDROXY-4-(3-HYDROXY-PROPYL)-PHENOXY)-3-(3-METHOXY-4-HYDROXY-PHENYL)-PROPANOL	Leaf	--	--		
0	3-HYDROXY-1(4-HYDROXY-3-METHOXYPHENYL)-1-PROPANONE	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-HYDROXY-2-(2-HYDROXY-4-(3-HYDROXY-PROPYL)-PHENOXY)-3-(3-METHOXY-4-HYDROXY-PHENYL)-PROPANOL	Leaf	--	--		
0	3-HYDROXY-2-(2-HYDROXY-4-(3-HYDROXY-PROPYL)-PHENOXY)-3-(3-METHOXY-4-XYLOSYL-OXY-PHENYL)-PROPANOL	Leaf	--	--		
0	3-HYDROXY-2-(2-HYDROXY-4-(3-RHAMNOSYL-OXY-PROPYL)-PHENOXY)-3-(3-METHOXY-4-HYDROXY-PHENYL)-PROPANOL	Leaf	--	--		
0	4-CHLOROINDOLE-3-ACETIC-ACID	Seed	--	--		
0	6''-DI-O-P-COUMAROYL-TRIFOLIN	Leaf	--	13		
0	8,13-EPOXY-LABD-14-EN-19-OIC-ACID	Leaf	--	--		
0	8,16-DIHYDROXY-HEXADECANOIC-ACID	Pollen Or Spore	--	--		
0	8,9-ISOPIMARIC-ACID	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	8-HYDROXY-12-OXOABIET-13(14)-ENOIC-ACID	Leaf	--	100		
0	9,16-DIHYDROXYHEXADECANOIC-ACID	Pollen Or Spore	--	--		
0	ABIETA-7,13,15-TRIEN-18-OIC-ACID-METHYL-ESTER	Resin, Exudate, Sap	--	--		
0	ABIETA-8,11,13-TRIENE-15,18-DIOL	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	ABIETADIENE	Wood	--	--		
3	ABIETIC-ACID	Resin, Exudate, Sap	180000	180000	-1.4142135623730954	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	ABIETIC-ACID	Shoot	--	--		
0	ABIETIC-ACID-METHYL-ESTER	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ABIETINAL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ABIETINOL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
19	ACETYL-CHOLINE	Sprout Seedling	--	--		
11	ADENINE	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ALPHA-CADINENE	Wood	--	--		
0	ALPHA-CADINENE	Leaf Essent. Oil	--	--		
3	ALPHA-CADINOL	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ALPHA-CADINOL	Leaf Essent. Oil	--	19000	-1	
0	ALPHA-CALACORENE	Wood	--	--		
7	ALPHA-CAROTENE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ALPHA-COPAENE	Wood	--	--		
0	ALPHA-COPAENE	Essential Oil	--	--		
0	ALPHA-COPAENE	Leaf Essent. Oil	--	500	-1	
0	ALPHA-FENCHENE	Leaf Essent. Oil	--	--		
0	ALPHA-FENCHOL	Essential Oil	--	--		
2	ALPHA-HUMULENE	Leaf Essent. Oil	--	4600	-0.5601171534351933	
0	ALPHA-LONGIPINENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-MUUROLENE	Stem	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ALPHA-MUUROLENE	Wood	--	--		
0	ALPHA-MUUROLENE	Essential Oil	--	--		
0	ALPHA-MUUROLENE	Leaf Essent. Oil	9900	93000		
11	ALPHA-PHELLANDRENE	Leaf	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil	--	--		
11	ALPHA-PHELLANDRENE	Essential Oil	--	--		
28	ALPHA-PINENE	Root Essent. Oil	175000	200000	1.0055904952191068	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
28	ALPHA-PINENE	Leaf	600	2500	-0.062233154531755666	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	ALPHA-PINENE	Resin, Exudate, Sap	--	--		
28	ALPHA-PINENE	Leaf Essent. Oil	--	312000	0.9632438931581422	
28	ALPHA-PINENE	Essential Oil	--	--		
28	ALPHA-PINENE	Flower	--	--		
28	ALPHA-PINENE	Plant	--	--		
28	ALPHA-PINENE	Twig	--	--		
13	ALPHA-TERPINENE	Root	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
13	ALPHA-TERPINENE	Leaf	--	--		
13	ALPHA-TERPINENE	Leaf Essent. Oil	--	34500	2.2661395470708254	
13	ALPHA-TERPINENE	Essential Oil	--	--		
23	ALPHA-TERPINEOL	Leaf Essent. Oil	6500	167000	2.509529498910562	
0	ALPHA-TERPINEOL ACETATE	Leaf Essent. Oil	--	--		
0	ALPHA-THUJENE	Leaf Essent. Oil	--	--		
0	ALPHA-YLANGENE	Leaf Essent. Oil	--	500	-1	
1	ANDROSTENEDIONE	Pollen Or Spore	--	--		



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
36	ANETHOLE	Leaf Essent. Oil	--	--		
7	ANISALDEHYDE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ARABINOSE	Leaf	600	600		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
112	ASCORBIC-ACID	Leaf	3000	3000	-0.165558324808047	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
20	BENZOIC-ACID	Leaf	--	--		
53	BETA-CAROTENE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	BETA-CARYOPHYLLENE	Leaf Essent. Oil	--	13900	-0.3232063399585825	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BETA-CARYOPHYLLENE	Essential Oil	--	--		
0	BETA-COPAENE	Stem	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	BETA-COPAENE	Leaf Essent. Oil	--	--		
5	BETA-ELEMENE	Essential Oil	--	--		
0	BETA-FARNESENE	Leaf Essent. Oil	--	600	-1	
0	BETA-FENCHENE	Leaf Essent. Oil	--	--		
0	BETA-GUAIENE	Leaf Essent. Oil	--	4100		
2	BETA-MYRCENE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	BETA-MYRCENE	Resin, Exudate, Sap	--	--		
3	BETA-PHELLANDRENE	Resin, Exudate, Sap	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	BETA-PHELLANDRENE	Leaf Essent. Oil	--	13000	0.1553903686246635	
3	BETA-PHELLANDRENE	Essential Oil	--	--		
3	BETA-PHELLANDRENE	Flower	--	--		
3	BETA-PHELLANDRENE	Twig	--	--		
13	BETA-PINENE	Root Essent. Oil	175000	200000	1.6637047098912103	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
13	BETA-PINENE	Leaf	200	1500	1.7833577159120335	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	BETA-PINENE	Resin, Exudate, Sap	--	--		
13	BETA-PINENE	Leaf Essent. Oil	--	65000	2.10395512758855	
13	BETA-PINENE	Essential Oil	--	--		
13	BETA-PINENE	Flower	--	--		
13	BETA-PINENE	Twig	--	--		
3	BETA-SELINENE	Wood	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
47	BETA-SITOSTEROL	Plant	--	--		
47	BETA-SITOSTEROL	Shoot	--	--		
47	BETA-SITOSTEROL	Pollen Or Spore	--	--		
3	BETA-TERPINEOL	Leaf Essent. Oil	--	--		
0	BETA-YLANGENE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
35	BORNEOL	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
35	BORNEOL	Leaf Essent. Oil	6500	62000	0.16251562096096972	
35	BORNEOL	Essential Oil	--	--		
0	BORNEOL-ACETATE	Essential Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BORNEOL-ACETATE	Leaf Essent. Oil	--	9600	-0.5119486076726953	
12	BORNYL-ACETATE	Leaf	60	175	-0.314398718058706	
6	BUTYRIC-ACID	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
102	CAFFEIC-ACID	Leaf	--	--		
0	CALACORENE	Essential Oil	--	--		
0	CALACORENE	Leaf Essent. Oil	--	--		
0	CALAMENENE	Essential Oil	--	--		
0	CALAMENENE	Leaf Essent. Oil	--	--		
2	CAMPESTEROL	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	CAMPESTEROL	Plant	--	--		
9	CAMPHENE	Resin, Exudate, Sap	--	--		
9	CAMPHENE	Essential Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	CAMPHENE	Leaf Essent. Oil	--	35000	0.3677628391862796	
41	CAMPHOR	Leaf Essent. Oil	--	--		
3	CAPRIC-ACID	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	CAPROIC-ACID	Leaf	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	CAPRONALDEHYDE	Leaf	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	CAR-2-ENE	Essential Oil	--	--		
0	CAR-3(10)-ENE	Essential Oil	--	--		
0	CAR-3-ENE	Resin, Exudate, Sap	--	--		
0	CAR-3-ENE	Plant	--	--		
0	CAR-3-ENE	Essential Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CAR-3-ENE	Leaf Essent. Oil	--	252000	1	
0	CAR-3-ENE	Flower	--	--		
0	CAR-3-ENE	Shoot	--	--		
0	CAROTENES	Leaf	170	170	1	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
31	CARYOPHYLLENE	Leaf	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
31	CARYOPHYLLENE	Leaf Essent. Oil	--	--		
0	CEROTIC-ACID	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	CHAMAZULENE	Leaf	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
77	CHLOROGENIC-ACID	Leaf	--	--		
20	CHOLINE	Flower	3400	3400	0.43193421279068084	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CIS-BETA-OCIMENE	Leaf	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
53	CITRAL	Leaf	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
20	CITRONELLAL	Leaf Essent. Oil	--	--		



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	COPABORNEOL	Stem	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	COPAENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CRYPTONE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	CUMINALDEHYDE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	D-DELTA-4-CARENE	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	D-INOSITOL	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
19	D-LIMONENE	Leaf	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	D-MYRCENE	Resin, Exudate, Sap	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	D-PIMARIC-ACID	Resin, Exudate, Sap	80000	80000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	DEHYDROABIETANE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	DEHYDROABIETANE	Wood	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	DEHYDROABIETIC-ACID	Resin, Exudate, Sap	70000	70000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	DEHYDROABIETIC-ACID	Shoot	--	--		
0	DEHYDROABIETINAL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DEHYDROABIETINOL	Shoot	--	--		
0	DEHYDROPINIFOLIC-ACID	Leaf	--	--		
8	DELTA-3-CARENE	Root Essent. Oil	400000	500000		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
8	DELTA-3-CARENE	Resin Essent. Oil	13000	360000		
9	DELTA-CADINENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	DELTA-CADINENE	Essential Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	DELTA-CADINENE	Leaf Essent. Oil	--	22300		
1	DELTA-CADINOL	Leaf Essent. Oil	--	9100		
0	DELTA-ELEMENE	Leaf Essent. Oil	--	500		
0	DI-P-COUMAROYL-TRIFOLIN	Leaf	--	--		
0	DIHYDRO-BETA-SITOSTEROL	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DIHYDRO-P-COUMARIC-ALCOHOL	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DIHYDROCONIFERYL-ALCOHOL	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	DIHYDROQUERCETIN	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	DIPENTENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DL-LIMONENE	Resin, Exudate, Sap	--	--		
0	DL-T-CADINOL	Stem Essent. Oil	--	--		
0	EO	Leaf	2000	5000	-0.5748200656170724	
0	EO	Root	--	--		
40	EPICATECHIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	EPIMANOILOXIDE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	EPITESTOSTERONE	Pollen Or Spore	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	EPSILON-MUUROLENE	Stem	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	EPSILON-MUUROLENE	Essential Oil	--	--		
0	EPSILON-MUUROLENE	Leaf Essent. Oil	--	--		
0	ERIODICTYOL-3'-O-BETA-D-GLUCOPYRANOSIDE	Leaf	--	--		
0	ESTERS	Leaf	64	122	-1.3541656912835798	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
12	ESTRAGOLE	Plant	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
12	ESTRAGOLE	Resin, Exudate, Sap	--	106670		
12	ESTRAGOLE	Leaf Essent. Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	EUGENOL-METHYL-ETHER	Plant	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	FENCHOL	Leaf Essent. Oil	--	--		
6	FENCHONE	Leaf Essent. Oil	--	--		
61	FERULIC-ACID	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	FRUCTOSE	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	FRUCTOSE	Leaf	25000	25000	0.31537077862545454	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	FURFURAL	Root	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
1	GALACTOSE	Leaf	30	30	-1	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GAMMA-CADINENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GAMMA-CADINENE	Wood	--	--		
0	GAMMA-CADINENE	Essential Oil	--	--		
0	GAMMA-CADINENE	Leaf Essent. Oil	--	2500	-0.6303261779642645	
2	GAMMA-CAROTENE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GAMMA-MUUROLENE	Stem	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GAMMA-MUUROLENE	Wood	--	--		
0	GAMMA-MUUROLENE	Essential Oil	--	--		
0	GAMMA-MUUROLENE	Leaf Essent. Oil	--	4000	-1	
0	GAMMA-PATCHOULENE	Leaf Essent. Oil	--	--		
11	GAMMA-TERPINENE	Leaf Essent. Oil	--	5000	-0.6592175679045217	
11	GAMMA-TERPINENE	Essential Oil	--	--		
11	GAMMA-TERPINENE	Resin, Exudate, Sap	--	--		
0	GERANYLGERANIOL-ACETATE	Shoot	--	--		
3	GINNOL	Pollen Or Spore	--	--		
1	GLUCOSAMINE	Shoot	--	--		
7	GLUCOSE	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	GLUCOSE	Leaf	22000	22000	-0.42788248580564037	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GUAIACYL-GLYCERIN-BETA-D-GLUCOSIDE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GUANOSINE	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	HEXAN-1-OL	Flower	--	--		
0	HOMOPROTOCATECHUIC-ACID	Leaf	--	--		
2	HUMULENE	Essential Oil	--	--		
7	INDOLE-3-ACETIC-ACID	Shoot	--	--		
7	INDOLE-3-ACETIC-ACID	Sprout Seedling	--	--		
0	INDOLE-3-ALDEHYDE	Seed	--	--		
0	INDOLE-3-METHANOL	Sprout Seedling	--	--		
0	ISOABIENOL	Leaf	--	8000		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISOCAPROIC-ACID	Leaf	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	ISODEXTROPIMARIC-ACID	Resin, Exudate, Sap	80000	80000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISOPIMARA-7,15-DIEN-18-AL	Plant	--	--		
0	ISOPIMARA-7,15-DIENE	Plant	--	--		
0	ISOPIMARADIENE	Wood	--	--		
2	ISOPIMARIC-ACID	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
2	ISOPIMARIC-ACID	Shoot	--	--		
0	ISOPIMARINAL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISOPIMARINOL	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	JUNIPERIC-ACID	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	L-HISTIDINE	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	L-LIMONENE	Leaf	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	L-PIMARIC-ACID	Resin, Exudate, Sap	180000	180000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	L-PIMARIC-ACID	Shoot	--	--		
60	LIMONENE	Resin, Exudate, Sap	--	--		
60	LIMONENE	Leaf Essent. Oil	--	--		
60	LIMONENE	Essential Oil	--	--		
60	LIMONENE	Flower	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Shoot	--	--		
1	LINARIN	Leaf	--	--		
0	LONGICYCLENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LONGIFOLENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LONGIFOLENE	Wood	--	--		
0	LONGIFOLENE	Leaf Essent. Oil	--	2600	-1	
15	LUTEIN	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LUTEIN-EPOXIDE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	M-COUMARIC-ACID	Pollen Or Spore	--	--		
0	M-MENTH-6-EN-8-OL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	M-MENTHA-1,3(8)-DIENE	Resin, Exudate, Sap	--	--		
0	M-MENTHA-6,8-DIENE	Resin, Exudate, Sap	--	--		
1	MALONIC-ACID	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	MALTOSE	Plant	--	--		
0	MANOYL-OXIDE-ACID	Leaf	--	3100		
0	MELIBIOSE	Leaf	3000	3000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MELIBIOSE	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MESO-INOSITOL	Leaf	3000	3000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-DEHYDROABIETANE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MONOTERPENES	Leaf	1000	4850	-1	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	MUUROLENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MYO-INOSITOL	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	MYRCENE	Leaf Essent. Oil	--	34500	-0.23247237005406013	
22	MYRCENE	Essential Oil	--	--		
22	MYRCENE	Flower	--	--		
22	MYRCENE	Twig	--	--		
0	N-(3-INDOLE-ACETYL)-ASPARTIC-ACID	Shoot	--	60		
1	N-NONACOSANE	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	NEOABIETIC-ACID	Resin, Exudate, Sap	180000	180000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	NEOABIETIC-ACID	Shoot	--	--		
2	NEOXANTHIN	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	OCTADECADIENOIC-ACID	Pollen Or Spore	--	--		
0	OCTADECENOIC-ACID	Pollen Or Spore	--	--		



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
25	P-COUMARIC-ACID	Pollen Or Spore	--	--		
16	P-CYMENE	Resin, Exudate, Sap	--	--		
16	P-CYMENE	Leaf Essent. Oil	--	1600	-0.7549604300774599	
0	P-CYMOL	Leaf Essent. Oil	--	--		
13	P-HYDROXY-BENZOIC-ACID	Bark	--	--		
3	P-HYDROXYACETOPHENONE	Leaf	--	--		
0	P-MENTHANOL-4	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	P-METHOXY-CINNAMIC-ACID	Pollen Or Spore	--	--		
13	PALMITIC-ACID	Pollen Or Spore	--	--		
0	PALUSTRIC-ACID	Resin, Exudate, Sap	100000	100000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PALUSTRIC-ACID	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PARAHYDROXYBENZOIC-ACID	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	PECTOLINARIN	Leaf	--	--		
26	PHENOL	Wood	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PIMAR-15-EN-4,8-DIOL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PIMARADIENE	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PIMARIC-ACID	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PIMARINAL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PIMARINOL	Resin, Exudate, Sap	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PIMARINOL	Shoot	--	--		
0	PINICORRETIN	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PINIFOLIC-ACID	Shoot	--	--		
0	PINIFOLIC-ACID	Leaf	--	--		
0	PINIFOLIC-ACID-MONOMETHYL-ESTER	Leaf	--	--		
0	PINIPICRIN	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	PINITOL	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	PINITOL	Leaf	20000	20000	1	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PINOBANKSIN	Stem	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PINOCARVEOL	Leaf Essent. Oil	--	--		
9	PINOCEMBRIN	Wood	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	PINOSYLVIN	Wood	2500	8000		
5	PINOSYLVIN	Wood	--	--		
5	PINOSYLVIN	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PINOSYLVINMONOMETHYLETER	Wood	--	3000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	PROCYANIDIN-B-1	Leaf	--	--		
2	PROCYANIDIN-B-3	Leaf	--	--		
1	PROCYANIDIN-B-6	Leaf	--	--		
1	PROCYANIDIN-C-2	Leaf	--	--		
1	PRODELPHINIDIN	Leaf	--	--		
2	PROPIONALDEHYDE	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
43	PROTOCATECHUIC-ACID	Bark	--	--		
176	QUERCETIN	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
176	QUERCETIN	Leaf	--	--		
0	QUERCETIN-3-(6''-O-ACETYL-BETA-D-GLUCOSIDE)	Leaf	--	34.5		
2	QUERCETIN-3-O-BETA-D-GLUCOSIDE	Leaf	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	QUERCETIN-7-BETA-GLUCOSIDE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	QUERCIMERITRIN	Leaf	--	--		
1	QUINIC-ACID	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	RAFFINOSE	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	RAFFINOSE	Leaf	8000	8000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	RHEOSMIN-O-BETA-D-GLUCOPYRANOSIDE	Leaf	--	306		
1	RHODOXANTHIN	Leaf	--	--		
0	ROSEOSIDE	Leaf	--	280	1	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	SABINENE	Leaf	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
5	SABINENE	Leaf Essent. Oil	--	4500	-0.5646050792348103	
5	SABINENE	Essential Oil	--	--		
0	SABINIC-ACID	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	SALICYLIC-ACID-METHYL-ESTER	Flower	--	--		
0	SCOPAROL	Leaf	--	--		
0	SEQUOYITOL	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	SHIKIMIC-ACID	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	STACHYOSE	Plant	--	--		
12	STIGMASTEROL	Plant	--	--		
14	SUCROSE	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	SUCROSE	Leaf	17000	17000	-0.4419983985239393	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	SULFUR	Leaf	--	--		
0	SYLPIN	Leaf	--	3		
0	SYLVESTRENE	Resin, Exudate, Sap	--	--		
0	T-CADINOL	Leaf Essent. Oil	--	2000	-1	
0	T-CADINOL	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	T-MUUROLOL	Leaf Essent. Oil	--	1.14	-1	



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	T-MUUROLOL	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
35	TANNIN	Bark	169000	169000	0.2441891045370524	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
17	TAXIFOLIN	Leaf	--	--		
0	TAXIFOLIN-3'-O-BETA-D-GLUCOSIDE	Leaf	--	--		
23	TERPINEN-4-OL	Essential Oil	--	--		
23	TERPINEN-4-OL	Leaf Essent. Oil	--	--		
0	TERPINENOL	Root	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
18	TERPINEOL	Root	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
9	TERPINOLENE	Leaf Essent. Oil	--	26000	1.7189798888776386	
9	TERPINOLENE	Resin, Exudate, Sap	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	TERPINOLENE	Essential Oil	--	--		
9	TERPINOLENE	Flower	--	--		
11	TESTOSTERONE	Pollen Or Spore	--	--		
0	TETRACOSANOL-(1)	Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	TRANS-BETA-OCIMENE	Leaf Essent. Oil	--	14000	1.4398134360490273	
0	TRICYCLENE	Essential Oil	--	--		
0	TRICYCLENE	Leaf Essent. Oil	--	4400	1	
0	TRICYCLENE	Resin, Exudate, Sap	--	--		
9	VALERIC-ACID	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	VANILLIC-ACID	Bark	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	VIOLAXANTHIN	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	VIT-E	Leaf	280	280		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	XYLOSE	Leaf	200	200		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	YLANGENE	Essential Oil	--	--		
0	ZINGERONE-O-BETA-D-GLUCOPYRANOSIDE	Leaf	--	336		