

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Boswellia serrata*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	ALPHA-THUJENE	Essential Oil		500000.0	2.8262426673204106	--
0	EO	Resin, Exudate, Sap		160000.0	0.16915880770206396	Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
16	P-CYMENE	Essential Oil		140000.0	0.522446086716829	--
0	ALPHA-THUJENE	Resin, Exudate, Sap		80000.0	-1.0	Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
9	BETA-BOSWELLIC-ACID	Resin, Exudate, Sap		63386.0	0.9999999999999999	--
13	BETA-PINENE	Essential Oil		62000.0	0.6462841768599185	--
0	(+)-LIMONENE	Essential Oil		45000.0	1.0	--
19	D-LIMONENE	Essential Oil		45000.0	0.8498619428795502	Jim Duke's personal files.
4	CADINENE	Essential Oil		40000.0	1.396804651753834	--
2	TERPINEOL-ACETATE	Essential Oil		35000.0		--
0	11-KETO-BETA-BOSWELLIC-ACID	Resin, Exudate, Sap		23058.0	0.9999999999999999	--
16	P-CYMENE	Resin, Exudate, Sap		22400.0	-1.0	Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
12	ESTRAGOLE	Essential Oil		20000.0	-1.7240124631383356	--
53	LINALOOL	Essential Oil		15000.0	-0.5158876661912609	--
2	ELEMOL	Essential Oil		12000.0	-1.0	--
18	TERPINEOL	Essential Oil		10000.0	1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	ALPHA-PINENE	Resin, Exudate, Sap		9920.0	-1.1654001321985943	Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
35	GERANIOL	Essential Oil		8000.0	-0.590948793183161	--
19	D-LIMONENE	Resin, Exudate, Sap		7200.0		Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
4	CADINENE	Resin, Exudate, Sap		6400.0		Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
2	ELEMOL	Resin, Exudate, Sap		2080.0		Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
35	GERANIOL	Resin, Exudate, Sap		1280.0		Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	3-O-ACETYL-11-KETO-BETA-BOSWELLIC-ACID	Resin, Exudate, Sap		550.0		--
0	3-O-ACETYL-BETA-BOSWELLIC-ACID	Resin, Exudate, Sap		150.0		--
0	BOSWELLIA-4-O-METHYL-GLUCURONARABINO GALACTAN	Inflorescence				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	L-SORBOSE	Plant				--
6	METHYL-CHAVICOL	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	3-BETA-HYDROXYTIRUCALL-8,24-DIEN-21-OIC-ACID	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
4	GLUCURONIC-ACID	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
13	BETA-PINENE	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	BORNEOL-ACETATE	Essential Oil				--
0	D-LACTOSE	Plant				--
0	3-ALPHA-HYDROXYTIRUCALL-8,24-DIEN-21-OIC-ACID	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	GLUCOSE	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
28	ALPHA-PINENE	Essential Oil				--
0	BASSORIN	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
7	DIPENTENE	Essential Oil				--
9	BETA-AMYRIN	Resin, Exudate, Sap				--
1	D-GLUCOSE	Plant				--
60	LIMONENE	Essential Oil				--
3	BETA-PHELLANDRENE	Essential Oil				--
0	ARABINOSE	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	HEMICELLULOSE	Wood				--
10	ALPHA-AMYRIN	Resin, Exudate, Sap				--
0	D-GALACTOSE	Plant				--
0	3-ALPHA-HYDROXY-URS-9-12-DIEN-24-OIC-ACID	Resin, Exudate, Sap				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	GAMMA-BOSWELLIC-ACID	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	(+)-ALPHA-PHELLANDRENE	Essential Oil				--
0	ALPHA-CAMPHOLYTIC-ACID	Essential Oil				--
0	D-FRUCTOSE	Plant				--
0	2-ALPHA-3-ALPHA-DIHYDROXY-URS-12-EN-24-OIC-ACID	Resin, Exudate, Sap				--
1	GALACTOSE	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
13	PALMITIC-ACID	Essential Oil				--
0	ALPHA-CAMPHOLENIC-ACID	Essential Oil				--
9	CAMPHENE	Essential Oil				--
8	FRUCTOSE	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	MYRTENIC-ACID	Essential Oil				--
11	ALPHA-PHELLANDRENE	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	URS-12-ENE-3-ALPHA-24-DIOL	Resin, Exudate, Sap				--
18	TERPINEOL	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	TRANS-10-THUJANIC-ACID	Essential Oil				--
22	MYRCENE	Essential Oil				--
10	ALPHA-BOSWELLIC-ACID	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
9	BETA-BOSWELLIC-ACID	Essential Oil				--
0	SERRATOL	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	CIS-10-THUJANIC-ACID	Essential Oil				--
23	TERPINEN-4-OL	Essential Oil				--
7	DIPENTENE	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
5	ACETYL-BETA-BOSWELLIC-ACID	Resin, Exudate, Sap				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	O-ACETYL-BETA-BOSWELLIC-ACID	Resin, Exudate, Sap				Hairfield, E. M., Hairfield Jr., H. H., McNair, H. M. 1989. GC, GC/MS, and TLC of Beta-Boswellic Acid and O-Acetyl-Beta-Boswellic Acid from B. serrata, B. cartei, and B. papyrifera. J. Chromatogr. Sci. 27 3: 127-133.
0	RHAMNOSE	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g. Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
7	LAURIC-ACID	Essential Oil				--
4	ACETYL-11-KETO-BETA-BOSWELLIC-ACID	Resin, Exudate, Sap				--
10	ALPHA-BOSWELLIC-ACID	Essential Oil				--
30	BOSWELLIC-ACID	Resin, Exudate, Sap				--
1	RAFFINOSE	Plant				--
0	3-KETOTIRUCALL-8,24-DIEN-21-OIC-ACID	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g. Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	IDOSE	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g. Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
13	ALPHA-TERPINENE	Essential Oil				--

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47	BETA-SITOSTEROL	Bark				Sabinsa: A series of well documented proprietary PR booklets, e.g.Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
0	GERANIC-ACID	Essential Oil				--