

List of All Chemicals

P Melaleuca viridiflora (Myrtaceae)

Common name(s)

Niaouli; Broad-Leaf Tea-Tree

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Chemical	Part <input type="button" value="All"/>	Low PPM	High PPM	StdDev	*Reference
ALPHA-PINENE	Leaf	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

Activities (28)

Allelochemic	
Allergenic	
Antiacne	
Antibacterial	
Antifeedant	
Antiflu	Economic & Medicinal Plant Research, 5: 195.
Antiinflammatory 500 mg/kg	
Antipneumonic	
Antiseptic	
Antispasmodic	
Antistaphylococcic	
Antiviral	Economic & Medicinal Plant Research, 5: 195.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Coleoptophile	
Expectorant	Michael Castleman 1991. The Healing Herbs. Rodale Press, Emmaus, PA 436 pp.
Flavor FEMA 15-150	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Herbicide IC50=30 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Insecticide 0.82 uM/fly	
Insectifuge 50 ppm	
Insectiphile	J. Stored. Prod. Res., 22:141, 1986.
Irritant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
P450-2B1-Inhibitor IC50=0.087 uM	
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Pesticide	
Sedative	Lawrence Review of Natural Products, Jun-90.
Spasmogenic	
Tranquilizer	Lawrence Review of Natural Products, Jun-90.
Transdermal	

ALPHA-TERPINEOL	Leaf	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
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Activities (23)

ACE-Inhibitor 100 ug/ml (weak activity)	
Aldehyde-Reductase-Inhibitor 100 ug/ml	Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpenes from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101.
Allelopathic	Wright, C.W. (Ed) 2002. Medicinal & Aromatic Plants - Industrial Profiles. Artemisia. 344pp. Maffei, M. (Ed) 2002. Vetiveria. The Genus Vetiveria. Taylor & Francis. NY, NY. 191pp. Southwell, I., Lowe, R. (Eds) 1999. Tea Tree. The Genus Melaleuca. Harwood Acad. Pub. Amsterdam, Netherlands.
Antiacne	
Antibacterial MIC=800-1,600 ug/ml	Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.
Anticancer	Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.
Anticariogenic MIC=800-1,600 ug/ml	Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.
Antiinflammatory	
Antiproliferant	
Antiseptic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Cicatrizant ED50=240 ug/g mus	
FLavor FEMA 5-40	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Insecticide 1.29 uM/fly	
Interleukin-6-Inhibitor	
Mosquitofuge > Deet	
Motor-Depressant	Buchbauer et al, e.g. Buchbauer et al, 1993. Therapeutic properties of essential oils and fragrances. Chap. 12 in Teranishi, R., Buttery, R.G and Sugisawa, H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC
Nematicide MLC=1 mg/ml	Shoyakugaku Zasshi, 44: 183.
Perfumery	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Pesticide	
Sedative	Buchbauer et al, e.g. Buchbauer et al, 1993. Therapeutic properties of essential oils and fragrances. Chap. 12 in Teranishi, R., Buttery, R.G and Sugisawa, H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC
Termiticide IC100=5 mg/g	
Transdermal	
Vulnerary ED50=240 ug/g mus	

BENZALDEHYDE Leaf -- -- Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

Activities (24)

- Allergenic
- Anesthetic
- Antibacterial
- Anticancer
- Antimutagenic
- Antipeptic
- Antiseptic
- Antispasmodic
- Antitumor
- Candidicide
- FLavor FEMA 150-800 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
- Immunostimulant
- Insecticide Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
- Insectifuge 50 ppm J. Stored. Prod. Res., 22:141, 1986.
- Motor-Depressant Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC
- Narcotic Merck 11th Edition
- Nematicide MLC=1 mg/ml Shoyakugaku Zasshi, 44: 183.
- Pesticide
- Sedative Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC
- Termiticide LD100=5 mg/g
- Tyrosinase-Inhibitor ID50=820 uM
- Tyrosinase-Inhibitor ID50=87 ug/ml
- Tyrosinase-Inhibitor ID50=0.82 mM
- Tyrosinase-Inhibitor ID50=830 uM

CINEOLE	Leaf	4600.0	15600.0	1.99	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
CINNAMIC-ACID-METHYL-ESTER	Leaf	7500.0	19500.0		*
CITRAL	Leaf	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

Activities (53)

Allergenic	
Antiallergenic	
Antiallergic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Antianaphylactic	
Antibacterial	
Anticancer	
Antihelicobacter	
Antiherpetic	
Antihistaminic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Antiinflammatory	
Antileishmanic	
Antioxidant	
Antiseptic 5.2 x phenol	
Antishock	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Antispasmodic	
Antitumor	
Antitumor (Colon)	
Antitumor (Liver)	
Antitumor (Skin)	
Antiulcer	
Antiviral	
Apoptotic	
Barbituate-Synergist	
Bronchorelaxant	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Calcium-Antagonist	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Carcinogenic	
Caspase-3-Inducer	
Chemopreventive	
Cytotoxic	
Estrogenic	
Expectorant	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Flavor FEMA 4-170	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Fungicide MIC 625 ug/ml	
Glaucomagenic	
Glutathionigenic	
Herbicide IC50=115 uM	Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.
Myorelaxant 200 mg/kg	
NF-kB-Inhibitor	
NO-Inhibitor	
Nematicide IC52=100 ug/ml	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Nematicide MLC=100-260 ug/ml	Shoyakugaku Zasshi, 44: 183.
P450-2B1-Inhibitor IC50=1.19 uM	
Perfumery	Merck 11th Edition
Pesticide	
Prostatitigenic 185 mg/kg/day/3 ms	
Sedative ED 1-32 mg/kg	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Sedative 1 mg/kg	
Teratogenic	
Trichomonicide LD100=150 ug/ml	
Trypanocide	
Tyrosinase-Inhibitor ID50=1.5 mM	
Tyrosinase-Inhibitor ID50=1,500 uM	

DIPENTENE Leaf -- -- Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

Activities (7)

Allergenic					
Antibacterial	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.				
Antiviral	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.				
Expectorant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Irritant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Pesticide					
Sedative	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				

EO	Leaf	10000.0	26000.0	1.27	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
EUGENOL	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities (76)

Acaricide LD50=5.47 ug/sq cm cf DEET at 37.59 ug/sq cm					
Allergenic					
Analgesic	Merck 11th Edition				
Anesthetic 200-400	Phytotherapy Research, 4: 93.				
AntiTNF					
Antiaggregant IC50=0.3 uM	Phytotherapy Research, 4: 93.				
Antiarachidonate					
Antibacterial 500 ppm	Valnet, J. 1982. The Practice of Aromatherapy. Translated from the 1980 French Edition by Robin Campbell and Libby Houston. Destiny Books, New York. 279 pp.				
Antibacterial MBC=400 ug/ml					
Anticonvulsant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Antiedemic 100	Phytotherapy Research, 4: 95.				
Antiestrogenic					
Antifeedant	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.				
Antigenotoxic 50-500 mg/kg orl mus					
Antiherpetic IC50=16.2-25.6 ug/ml					
Antiinflammatory (11 uM) IC~97=1,000 uM					
Antikeratotic IC50=16.2-25.6 ug/ml					
Antimitotic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.				
Antinitrosating					
Antioxidant IC65=30 ppm					
Antioxidant 10 uM					
Antiprostaglandin 11 uM					
Antiprostaglandin IC50=9.2 mM					
Antipyretic 3 ml/man/day					
Antiradicular EC50=2 ul/l					
Antisalmonella MIC=400 ug/ml					
Antiseptic 3 ml/man/day					
Antiseptic 400 ug/ml					
Antispasmodic	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.				
Antistaphylococcic	Wright, C.W. (Ed)2002. Medicinal&Aromatic Plants-Industrial Profiles. Artemisia. 344pp. Maffei, M. (Ed)2002. Vetiveria. The Genus Vetiveria. Taylor&Francis. NY, NY. 191pp. Southwell, I., Lowe, R. (Eds)1999. Tea Tree. The Genus Melaleuca. Harwood Acad. Pub. Amsterdam, Netherlands.				
Antithromboxane	Lawrence Review of Natural Products, Jul-87.				
Antitumor	Zheng, G-Q., Kenney, P.M., and Lam, L.K.T. Sesquiterpenes From Clove (Eugenia caryophyllata) As Potential Anticarcinogenic Agents. Journal of Natural Products 55(7): 999-1003, 1992.				
Antiulcer					
Antiviral IC50=16.2-25.6 ug/ml					
Apifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.				
CNS-Depressant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
COX-1-Inhibitor IC97=1,000 uM					
COX-2-Inhibitor IC>97=1,000 uM					
COX-2-Inhibitor IC50=129 uM					
Calcium-Antagonist IC50=224 uM					

Calcium-Antagonist IC50=200 uM gpg				
Cancer-Preventive				Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide				Phytotherapy Research, 4: 93.
Carcinogenic?				Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Carminative				Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. J. Pharm. Pharmacol. 46: 14-18, 1994.
Choleretic				
Cytochrome-P450-Inhibitor				Pizzorno, J. 1998. Total Wellness. Prima Health, a division of Prima.
Cytotoxic 25 ug/ml				Phytotherapy Research, 4: 93.
Dermatitigenic				
Enterorelaxant				J. Aromatherapy 4: 22.
FLavor FEMA 10-500				Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide				
Hepatoprotective 100 ppm				
Herbicide				
Insecticide				
Insectifuge				Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Irritant				
Juvabional				Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Larvicide				
Motor-Depressant				Buchbauer et al. e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC
Nematicide MLC=2,000 ug/ml				Shoyakugaku Zasshi, 44: 183.
Neurotoxic				R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That:The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benficent Nature. The Risk of Herbal Preparations. Anns. Intern. Med. 117(2):165-6; Huxtable, R.
Perfumery				Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Pesticide				
Prostaglandin-Synthesis-Inhibitor 1 mM rbt				Chen, S. J., Wang, M. H., Chen, I. J. 1996. Antiplatelet and Calcium Inhibitory Properties of Eugenol and Sodium Eugenol Acetate. Gen Pharmacol, 27(4): 629-633.
Prostaglandin-Synthesis-Inhibitor IC50=9.2 uM				
Sedative				
Termiticide LD100=5 mg/g				
Trichomonicide LD100=300 ug/ml				
Trichomonistat IC50=10 ug/ml				Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Trypsin-Enhancer				Lawrence Review of Natural Products, Dec-93.
Ulcerogenic				Phytotherapy Research, 4: 93.
Varroacide				
Vasodilator				
Vermifuge				

L-LIMONENE Leaf -- -- Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

Activities (2)

Antiacetylcholinesterase IC25=1.2 mM
Antiacetylcholinesterase IC27=164 ug/ml

LINALOL Leaf -- -- Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

LINALOL-MONOXIDE Leaf -- -- Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

NEROLIDOL Leaf -- -- Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

Activities (11)

Aldose-Reductase-Inhibitor

Allergenic

Antiacne

Antibacterial MIC=25-200 ug/ml Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.

Anticarcinogenic MIC=25-200 ug/ml Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105.

Antifeedant 1 mM (diet) Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.

Antistreptococcic

FLavor FEMA 1-10 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Nematicide MLC=1 mg/ml Shoyakugaku Zasshi, 44: 183.

Perfumery Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Pesticide

SESQUITERPENES	Leaf	--	--			Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
TRANS-BETA-OCIMENE	Leaf	2000.0	5200.0	1.41	*	