

List of All Chemicals

P Micromeria fruticosa (Lamiaceae)

Common name(s)

Tasnanesi

How used

Medicinal

*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
1-OCTEN-3-OL	Leaf	--	120.0	0.46	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of Micromeria congesta. J. Ess. Oil Res., 3: 387-393.
3-OCTANOL	Leaf	--	1.0	-0.51	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of Micromeria congesta. J. Ess. Oil Res., 3: 387-393.

Activities (2)

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

ALPHA-GUAIENE	Leaf	--	1.0		Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of Micromeria congesta. J. Ess. Oil Res., 3: 387-393.
ALPHA-PINENE	Leaf	1.0	390.0	-0.2	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of Micromeria congesta. J. Ess. Oil Res., 3: 387-393.

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 -- 1.0 -0.59 Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of *Micromeria congesta*. J. Ess. Oil Res., 3: 387-393.

Activities (23)

ACE-Inhibitor 100 ug/ml (weak activity)
 Aldose-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 reviewed 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

BETA-CARYOPHYLLENE Leaf -- 2640.0 0.96 Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of *Micromeria congesta*. J. Ess. Oil Res., 3: 387-393.

BETA-PINENE Leaf -- 960.0 0.99 Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of *Micromeria congesta*. J. Ess. Oil Res., 3: 387-393.

Activities (13)

Allergenic
 Antiinflammatory
 Antiseptic Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
 Antispasmodic
 Candidicide
 FLavor FEMA 15-600 Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
 Herbicide 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.
 Insectifuge Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
 Irritant Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
 Perfumery Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
 Pesticide
 Spasmogenic Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
 Transdermal

BICYCLOELEMENE Leaf -- 1.0 -1.05 Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of *Micromeria congesta*. J. Ess. Oil Res., 3: 387-393.

BORNEOL Leaf -- 570.0 0.23 Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of *Micromeria congesta*. J. Ess. Oil Res., 3: 387-393.

Activities (35)

(-)-Chronotropic 29 ug/ml	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
(-)-Inotropic 29 ug/ml	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Allelochemic	
Analgesic	
Antiacetylcholine	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Antibacterial MIC=125-250 ug/ml	
Antibronchitic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antiescherichic MIC=125 ug/ml	
Antifeedant	
Antiinflammatory	
Antiotitic	
Antipyretic	
Antisalmonella MIC=125 ug/ml	
Antispasmodic ED50=0.008 mg/ml	
Antistaphylococcic MIC=250 ug/ml	
Antiyeast MIC=250 ug/ml	
CNS-Stimulant	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
CNS-Toxic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Candidicide MIC=250 ug/ml	
Choleretic	
FLavor FEMA<1	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Fungicide	
Hepatoprotective	
Herbicide IC50=470 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.
Herbicide IC50=470 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.
Inhalant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Insect-Repellent	
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Irritant	Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp.
Myorelaxant	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
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	Medline (post 1990 searches filed in my computer)
Tranquilizer	

CAMPHENE	Leaf	1.0	1.0	-0.19	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
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Activities (9)

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.
Antilithic?	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antioxidant	Jim Duke's personal files.
Expectorant	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
FLavor FEMA 15-175	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
Hypocholesterolemic?	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Pesticide	
Spasmogenic	Fitoterapia No.59-1984.

CARVONE	Leaf	--	90.0	-0.26	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
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Activities (19)

Allergenic	
Antiacetylcholinesterase IC50=1.4-1.8 mM	
Antiproliferative	
Antiseptic 1.5 x phenol	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
CNS-Stimulant	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidistat	
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.
FLavor FEMA 80-3,000	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungistat	
Insecticide	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
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
Trichomonicide LD100=300 ug/ml	
Vermicide	

CIS-BETA-OCIMENE	Leaf	--	120.0	-0.71	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
DELTA-CADINENE	Leaf	--	1.0	-0.46	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.

Activities (9)

Aldose-Reductase-Inhibitor	
Antiacne	
Antibacterial MIC800 ug/ml	Muroi, H. and Kubo, J. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against <i>Streptococcus mutans</i> . J. Agric. Food Chem. 41: 1102-1105.
Anticariogenic MIC800 ug/ml	Muroi, H. and Kubo, J. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against <i>Streptococcus mutans</i> . J. Agric. Food Chem. 41: 1102-1105.
Antistreptococcic	
Cytochrome-P450-Inducer	
P450-Inducer	
Pesticide	
Testosterone-Inducer	

EO	Leaf	--	30000.0	1.62	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
GAMMA-TERPINENE	Leaf	--	1.0	-0.37	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.

Activities (11)

ACE-Inhibitor 100 ug/ml (weak activity)	
Acaricide	
Aldose-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.
Antiacetylcholinesterase IC23=1.2 mM	
Antifeedant	Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
Antioxidant	Jim Duke's personal files.
FLavor FEMA 1-40	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Insectifuge	Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
Irritant	Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Pesticide	

ISOMENTHONE	Leaf	1110.0	7080.0	1.64	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
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Activities (3)

Antiacholinesterase IC50=1.6 mM

Antioxidant

Antiradicular

ISOPULEGOL	Leaf	--	180.0	-0.34	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
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Activities (3)

Antiacholinesterase IC50=2.0 mM

FLavor FEMA 5-30

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

Perfumery

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

LIMONENE	Leaf	--	1.0	-0.45	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
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Activities (60)

AChE-Inhibitor	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8.
Acaricide LC100=8 uM	
Allelochemic	
Allergenic 1/20th carene	
Antiacetylcholinesterase IC22-26=1.2 mM	
Antiadenomic	
Antialzheimeran?	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8.
Antiasthmatic	
Antibacterial	Revista Itiliana Eppos, 12: 5, 1994.
Anticancer	
Antiesophagitic	
Antifeedant	
Antiflu	Economic & Medicinal Plant Research, 5: 195.
Antiinflammatory	
Antilithic	
Antilymphomic	
Antimetastatic (Stomach)	
Antimutagenic	Economic & Medicinal Plant Research, 6: 235.
Antiobesity	
Antiseptic	
Antispasmodic ED50=0.197 mg/ml	Fitoterapia No.59-1984.
Antitumor	
Antitumor (Breast)	
Antitumor (Colon)	
Antitumor (Pancreas)	
Antitumor (Prostate)	
Antitumor (Stomach)	
Antiviral	
Apoptotic	
Bronchoprotectant	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidistat	
Chemopreventive	
Cholesterolytic	
Detoxicant	
Enterocontractant	J. Aromatherapy 4: 22.
Expectorant	
FLavor	
Fungiphilic	J. Agric. Food Chem. 43: 2283.
Fungistat	
GST-Inducer	
Herbicide IC50=45 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.
Histaminic	
Immunomodulator	
Insecticide 0.37 uM/fly	
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Interleukin-6-Inhibitor	
Irritant	
Lipolytic	
Myorelaxant 50 mg/kg	
NO-Genic	
Nematicide IC=100 ug/ml	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.
Ornithine-Decarboxylase-Inhibitor ~750 mg/kg (diet)	
Ozone-Scavenger	
P450-Inducer	
Peristaltic	
Pesticide	
Photosensitizer	Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp.
Sedative ED=1-32 mg/kg	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Transdermal	

Activities (63)

Allergenic	Martindale's 29th
Analgesic	Martindale's 28th
Anesthetic 2,000 ppm	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.
Antiacetylcholinesterase IC50=2.0 mM	
Antiaggregant IC50=750	
Antiallergic	J. Food Hyg. Soc. Jap. 33(6): 569.
Antiasthmatic	Mills, Simon and Bone, Kerry. 2000. Phytotherapy. Churchill Livingstone, Edinburgh.
Antibacillus MIC=1.25 mg/ml	
Antibacterial MIC=0.625-2.5	
Antibronchitic	Martindale's 28th
Antidandruff	A.L.L. Hunting. Encyclopedia of Shampoo Ingredients. Micelle Press, Cranford NJ. 467 pp.
Antiescherichic MIC=1.25 mg/ml	
Antihalitotic	American Health, 12(4): 17, 1993.
Antihistaminic	J. Food Hyg. Soc. Jap. 33(6): 569.
Antiinflammatory	Martindale's 28th
Antilisteria MIC=0.625 mg/ml	
Antineuralgic	
Antiodontalgic	Martindale's 28th
Antipruritic	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.
Antipyretic	
Antirheumatic	Martindale's 28th
Antisalmonella MIC=0.625 mg/ml	
Antiseptic 4 x phenol	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Antisinusitic	Martindale's 28th
Antispasmodic ED50=0.01 mg/ml	Fitoterapia No.59-1984.
Antistaphylococcic MIC=0.625 mg/ml	
Antistreptococcic MIC=0.4 mg/ml	
Antitartar	
Antivaginitic	
Antivulvitic	
Bradycardic 65 mg/3 x day/woman	Martindale's 28th
Bronchomucolytic	Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 200.
Bronchomucotropic	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.
Bronchorrhic	Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 200.
CNS-Depressant	
CNS-Stimulant	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Calcium-Antagonist	
Candidicide MIC=0.625 mg/ml	
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	
Ciliotoxic	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.
Congestant	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.
Convulsant	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 Benificent Nature. The Risk of Herbal Preparations. Anns. Intern. Med. 117(2):165-6; Huxtable, R.
Counterirritant	
Decongestant? 11 mg/man	Eccles, R., et al. 1989. The effects of oral administration of (-)-menthol on nasal resistance to airflow and nasal sensation of airflow in subjects suffering from nasal congestion associated with the common cold. J. Pharm. Pharmacol. 42: 652-654, 1990.
Dermatitigenic	
Diaphoretic	Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp.
Enterorelaxant	J. Aromatherapy 4: 22.
Expectorant	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.
Gastroedative	Merck 11th Edition
Irritant	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.

Myorelaxant	Martindale's 29th
Nematicide MLC=1 mg/ml	Shoyakugaku Zasshi, 44: 183.
Neurodepressant	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.
Neuropathogenic 40-100 mg/day/rat	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.
Nociceptive	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.
Perfumery	Merck 11th Edition
Pesticide	
Refrigerant	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.
Rubefacient	
Termiticide	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Transdermal	
Vibriocide	

MENTHONE Leaf 1.0 6000.0 0.12 Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of *Micromeria congesta*. J. Ess. Oil Res., 3: 387-393.

Activities (30)

Acaricide	
Allelopathic	
Analgesic	
Antiacetylcholinesterase IC50=1.4 mM	
Antiaggregant IC50=750	
Antiallergic	J. Food Hyg. Soc. Jap. 33(6): 569.
Antibacillary MIC=1.25 mg/ml	
Antibacterial MIC=0.625-5 mg/ml	
Antiescherichic MIC=5 mg/ml	
Antihistaminic	J. Food Hyg. Soc. Jap. 33(6): 569.
Antilisteria MIC=1.25 mg/ml	
Antisalmonella MIC=5 mg/ml	
Antiseptic 2.25 x phenol	Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176)
Antispasmodic ED50=0.044 mg/ml	Fitoterapia No.59-1984.
Antistaphylococcic MIC=0.625-2.5 mg/ml	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Candidicide MIC=2.5 mg/ml	
Cerebrotoxic orl man	J. Aromatherapy 4: 24.
Culicide LC50=156-194 mg/l	
FLavor FEMA 5-50	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide	
Insecticide LC50=156-194 mg/l	
Larvicide LC50=156-194 mg/l	
Mutagenic	
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	
Psychoactive	
Sedative	Ortiz de Urbina, A.V., Martin*, M.L., Montero, M.J., Moran, A., and San Roman, L. 1988. Sedating and Antipyretic Activity of the Essential Oil of <i>Calamintha sylvatica</i> subsp. <i>Ascendens</i> . Journal of Ethnopharmacology, 25: 165-171, 1989.
Trichomonicide LD100=600 ug/ml	

MYRCENE Leaf -- 300.0 -0.06 Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of *Micromeria congesta*. J. Ess. Oil Res., 3: 387-393.

Activities (22)

ACE-Inhibitor 100 ug/ml

Aldose-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.

Allergenic

Analgesic Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991.

Antibacterial

Anticonvulsant

Antimutagenic Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. Environmental and Molecular Mutagenesis 18: 28-34, 1991.

Antinitrosaminic

Antinociceptive 10-20 mg/kg ipr mus Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990.

Antinociceptive 20-40 mg/kg scu mus Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. J. Pharm. Pharmacol. 42: 877-878, 1990.

Antioxidant Jim Duke's personal files.

Antispasmodic Jim Duke's personal files.

Chemopreventive Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.

FLavor FEMA 0.5-9 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Fungicide 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.

Hypothermic

Insectifuge

Irritant Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.

Myorelaxant 100-200 mg/kg

P450-2B1-Inhibitor IC50=0.14 uM

Perfumery Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

Pesticide

P-CYMENE	Leaf	--	150.0	-0.28	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
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Activities (16)

Analgesic Martindale's 28th

Antiacetylcholinesterase IC40=1.2 mM

Antibacillary

Antibacterial

Antiflu

Antirheumatalgic Martindale's 28th

Antiviral

FLavor FEMA 12-250 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Fungicide 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.

Herbicide IC50=50 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.

Insectifuge Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.

Irritant Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.

Laxative Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.

Pesticide

Sedative Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.

Trichomonicide LD100=50 ug/ml

PIPERITENONE	Leaf	--	2380.0	1.23	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
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Activities (3)

Antiacetylcholinesterase IC50=110 ug/ml

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

Toxic 10,000/man Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

PIPERITENONE-OXIDE	Leaf	--	1880.0	-0.84	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
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Activities (2)					
Insecticide	Shah, G.C., Bhandari, R. & Mathela, C.S. 1992. 1,2-Epoxy-p-Menthane Derivatives from some Labiatae Species. J. Ess. Oil Res. 4: 57-59.				
Pesticide					
PIPERITONE	Leaf	840.0	7710.0	3.7	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of Micromeria congesta. J. Ess. Oil Res., 3: 387-393.
Activities (7)					
Antiasthmatic					
FLavor FEMA 1-2	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Herbicide IC50=30 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.				
Herbicide IC50=75 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.				
Insectifuge (> DEET)	Bowers, W.S., Ortego, F., You, X., and Evans, P.H. Insect Repellents From The Chinese Prickly Ash Zanthoxylum bungeanum. Journal of Natural Products, 56(6): 935-938, 1993.				
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Pesticide					
PULEGONE	Leaf	13710.0	18780.0	1.74	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of Micromeria congesta. J. Ess. Oil Res., 3: 387-393.
Activities (28)					
AChE-Inhibitor	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, Oest. Biochem. & Physiol., 23, 1985, 383-8.				
Antiacetylcholinesterase IC50=0.9 mM					
Antiacetylcholinesterase IC50=136 ug/ml					
Antialzheimeran?	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, Oest. Biochem. & Physiol., 23, 1985, 383-8.				
Antibacterial	Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus Bystropogon*. Planta Medica, 57: 347, 1991.				
Anticholinesterase	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, Oest. Biochem. & Physiol., 23, 1985, 383-8.				
Antihistaminic	Ortiz De Urbina, A.V., Martin, M.L., Montero, M.J., Carron, R., Sevilla, M.A., San Roman, L. 1989. Antihistaminic activity of pulegone on the guinea-pig ileum. J. Pharm. Pharmacol. 42: 295-296, 1990.				
Antipyretic					
Avifuge					
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.				
Candidicide	Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus Bystropogon*. Planta Medica, 57: 347, 1991.				
Cerebrotoxic orl man	J. Aromatherapy 4: 24.				
Encephalopathic 80 mg/kg orl rat	Lawrence Review of Natural Products, Jan-92.				
FLavor FEMA 5-30	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Fungicide	Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus Bystropogon*. Planta Medica, 57: 347, 1991.				
Glutathionalytic	Lawrence Review of Natural Products, Jan-92.				
Hallucinogenic	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 Benificent Nature. The Risk of Herbal Preparations. Anns. Intern. Med. 117(2):165-6; Huxtable, R.				
Hepatotoxic	Lewis, E.J. and Friedrich, E.C. 1989. The Essential Oil of Poliomintha incana. Planta Medica 56(2): 224-226, 1990.				
Herbicide IC50=1.5 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	Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, Oest. Biochem. & Physiol., 23, 1985, 383-8.				
Insectifuge					
Nephrotoxic	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 Benificent Nature. The Risk of Herbal Preparations. Anns. Intern. Med. 117(2):165-6; Huxtable, R.				
Neurotoxic					
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Pesticide					
Pulifuge					
Pulmonotoxic					
Sedative					
TERPINEN-4-OL	Leaf	--	2460.0	1.06	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of Micromeria congesta. J. Ess. Oil Res., 3: 387-393.

Activities (23)

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.
Antiacetylcholinesterase IC21-24=1.2 mM	
Antiacne	
Antiallergic	
Antiasthmatic	Chin. J. Tuber. Respir. Dis., 4:203, 1982.
Antibacterial	
Antioxidant	
Antiseptic	Flav. & Frag. J. 9: 129.
Antispasmodic	
Antitussive	Chin. J. Tuber. Respir. Dis.
Antiulcer	
Bacteriostatic	Chin. J. Tuber. Respir. Dis.
Diuretic 0.1 ml/rat	
Fungicide	
Herbicide IC50=200 mM	Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.
Herbicide IC50=22 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.
Insectifuge	
Irritant	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Nematicide MLC=1 mg/ml	Shoyakugaku Zasshi, 44: 183.
Pesticide	
Renoirritant	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Spermicide ED100=0.015	
Vulnerary	Lawrence Review of Natural Products, Jan-91.

TERPINOLENE Leaf -- 1.0 -0.23 Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of *Micromeria congesta*. J. Ess. Oil Res., 3: 387-393.

Activities (9)

Allelochemic	
Antifeedant	
Antinitrosaminic	
Antioxidant	
Deodorant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
FLavor FEMA 15-60	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Fungicide	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.
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Pesticide	