

List of All Chemicals

P Pinus pinea (Pinaceae)

Common name(s)

Italian Stone Pine; Pignolia

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	All	Low PPM	High PPM	StdDev	*Reference
ALANINE	Seed		12540.0	15000.0	1.03	*
Activities (3)						
Antioxidant	Larson, R.A. 1987. Review Article Number 30. The Antioxidants of Higher Plants. Phytochemistry. 27: 969-978.					
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.					
Oxidant	Larson, R.A. 1987. Review Article Number 30. The Antioxidants of Higher Plants. Phytochemistry. 27: 969-978.					
ARGININE	Seed		46680.0	71600.0	1.99	*
Activities (14)						
Antidiabetic?	Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.					
Anti-cephalopathic	Martindale's 29th					
Antihepatitic	Martindale's 29th					
Antihypertensive						
Antiimpotence						
Antiinfertility 4 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.					
Antioxidant?						
Aphrodisiac 3 g/day						
Diuretic						
Hypoammonemic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.					
NO-Genic						
Pituitary-Stimulant						
Spermigenic 4 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.					
Vasodilator						
ASH	Seed		43000.0	47155.0	-0.02	*
ASPARTIC-ACID	Seed		21870.0	26000.0	0.3	*
Activities (3)						
Antimorphinic	Martindale's 28th					
Neuroexcitant	Martindale's 28th					
Roborant	Merck 11th Edition					
CALCIUM	Seed		260.0	280.0	-0.71	USDA's Ag Handbook 8 and sequelae)

Activities (28)

AntiPMS 1 g/day	
Antiallergic 500 mg/day	
Antianxiety	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antiarrhythmic 500-1,500 mg	
Antiarthritic 1,000 mg/day	
Antiatherosclerotic 500 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticlimacteric 1,000-1,500 mg/day	
Antidepressant	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidote (Aluminum)	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidote (Lead)	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antihyperkinetic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antihypertensive	
Antiinsomniac	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antimenopausal 1,000-1,500 mg/day	
Antiobesity	
Antiosteoporotic 500-2,000 mg/day	
Antiperiodontitic 750 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antirheumatic 1,000 mg/day	
Antistress 500-1,500 mg/day	
Antitic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anxiolytic 500-1,500 mg/day	
Calcium-Channel-Blocker	
Diuretic	
Hypocholesterolemic 500 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Hypotensive 1 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Laxative 1,000-1,200 mg	
Tranquilizer 500-1,500 mg/day	
Vasodilator	

CARBOHYDRATES	Seed	116000.0	152415.0	-1.47	*
COPPER	Seed	10.0	11.0	-0.35	USDA's Ag Handbook 8 and sequelae)

Activities (12)

Antianemic	
Antiarthritic	
Antidiabetic 2-4 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antifatigue	
Antiinflammatory	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antinociceptive	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiosteoporotic	
Cardioprotective	
Contraceptive	Martindale's 28th
Hypocholesterolemic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Immunomodulator	
Schizophrenigenic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

CYSTINE	Seed	4350.0	4660.0	1.05	USDA's Ag Handbook 8 and sequelae)
---------	------	--------	--------	------	------------------------------------

Activities (2)

Adjuvant	Merck 11th Edition
Antihomocystinuric	Martindale's 29th

FAT	Seed	474000.0	560500.0	1.55	*
FIBER	Seed	8000.0	10000.0	-0.99	*

Activities (15)					
Angiotensin-Receptor-Blocker					
Antidiabetic					
Antihypertensive					
Antiobesity					
Antitumor	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Antiulcer	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Beta-Blocker					
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.				
Cardioprotective					
Diuretic					
Hypocholesterolemic					
Hypotensive 10 g/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Hypouricemic					
Laxative					
Vasodilator					

GADOLEIC-ACID	Seed	9680.0	10375.0	0.83	USDA's Ag Handbook 8 and sequelae)
GLUTAMIC-ACID	Seed	40840.0	59800.0	0.76	*

Activities (8)					
Antialkali? 500-1,000 mg/day/orl/man	Martindale's 29th				
Antiepileptic					
Antihyperammonemic	Martindale's 29th				
Antilithic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Antiprostatic 125-250 mg 3 x/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.				
Antiretardation	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Anxiolytic	Merck 11th Edition				
Neurotoxic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				

GLYCINE	Seed	12230.0	15000.0	0.59	*
---------	------	---------	---------	------	---

Activities (12)					
Antiacid	Martindale's 29th				
Antialdosteronic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Antidote (Hypoglycin-A)	Martindale's 29th				
Antiencephalopathic	Martindale's 29th				
Antigastric	Martindale's 29th				
Antiprostatic 125-250 mg 3 x/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.				
Antipruritic	Merck 11th Edition				
Antisickling	Ekeke, G.I. and Shode, F.O. 1988. Phenylalanine is the Predominant Antisickling Agent in Cajanus cajan Seed Extract. Planta Medica 56(1): 41, 1990.				
Antiulcer	Martindale's 29th				
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.				
Neuroinhibitor	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.				
Uricosuric					

HISTIDINE	Seed	5750.0	7475.0	0.36	*
-----------	------	--------	--------	------	---

Activities (7)					
Antiartherosclerotic					
Antinephritic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Antioxidant					
Antiulcer					
Antiuremic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Essential	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Oxidant					

IRON	Seed	92.0	100.0	-0.24	USDA's Ag Handbook 8 and sequelae)
------	------	------	-------	-------	------------------------------------

Activities (6)					
Antiakathisic			Martindale's 29th		
Antianemic			Martindale's 29th		
Anticanker					
Anticheilitic			Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.		
Antimenorrhagic 100 mg/day/wmn/orl			Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).		
Prooxidant					

ISOLEUCINE	Seed	9330.0	10700.0	0.03	*
------------	------	--------	---------	------	---

Activities (3)					
Antiencephalopathic?			Martindale's 29th		
Antipellagric			Martindale's 28th		
Essential			Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.		

KILOCALORIES	Seed	5150.0	5850.0	0.78	*
--------------	------	--------	--------	------	---

LEUCINE	Seed	17300.0	20600.0	0.34	*
---------	------	---------	---------	------	---

Activities (2)					
Antiencephalopathic			Martindale's 29th		
Essential			Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.		

LINOLEIC-ACID	Seed	206890.0	221725.0	0.98	USDA's Ag Handbook 8 and sequelae)
---------------	------	----------	----------	------	------------------------------------

Activities (27)					
5-Alpha-Reductase-Inhibitor					
AntiMS			Economic & Medicinal Plant Research, 6: 189.		
Antiacne					
Antiallopecic					
Antianaphylactic			Economic & Medicinal Plant Research, 6: 189.		
Antiandrogenic					
Antiarteriosclerotic					
Antiarthritic			Economic & Medicinal Plant Research, 6: 189.		
Anticoronary			Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.		
Antieczemic			Economic & Medicinal Plant Research, 6: 189.		
Antifibrinolytic			Economic & Medicinal Plant Research, 1: 53.		
Antigranular					
Antihistaminic			Economic & Medicinal Plant Research, 6: 189.		
Antiinflammatory IC50=31 uM					
Antileukotriene-D4 IC50=31 uM					
Antimenorrhagic			Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).		
Antiprostatic			Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).		
Cancer-Preventive			Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.		
Carcinogenic			Science News, 146: 421.		
Comedolytic					
Hepatoprotective					
Hypocholesterolemic			Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)		
Immunomodulator			Economic & Medicinal Plant Research, 6: 189.		
Insectifuge			Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.		
Metastatic			Science News, 146: 421.		
Nematicide			Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.		
Propecic					

LINOLENIC-ACID	Seed	6540.0	7010.0	-0.46	USDA's Ag Handbook 8 and sequelae)
----------------	------	--------	--------	-------	------------------------------------

LYSINE	Seed	9010.0	9655.0	-0.33	USDA's Ag Handbook 8 and sequelae)
--------	------	--------	--------	-------	------------------------------------

Activities (4)	
Antialkalotic	Martindale's 29th
Antiherpetic 0.5-3 g/day	
Essential	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Hypoarginanemic 250 mg/kg	Martindale's 29th

METHIONINE	Seed	4300.0	6050.0	0.45	*
------------	------	--------	--------	------	---

Activities (15)	
Anticataract	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antidote (Acetaminophen) 10 g/16hr/man/orl	Martindale's 29th
Antidote (Paracetamol) 10 g/16hr/man/orl	Martindale's 29th
Antieczemic	
Antihepatotic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antioxidant	
Antiparkinsonian 1-5 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Emetic	Martindale's 29th
Essential	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Glutathionigenic	Martindale's 29th
Hepatoprotective	
Lipotropic	Merck 11th Edition
Urine-Acidifier 200 mg/3x/day/man/orl	Martindale's 28th
Urine-Deodorant	Martindale's 29th

MUFA	Seed	190760.0	204435.0	0.69	USDA's Ag Handbook 8 and sequelae)
------	------	----------	----------	------	------------------------------------

Activities (13)	
Allergenic	
Anemiagenic	
Antiinflammatory IC50=21 uM	
Antileukotriene-D4 IC50=21 uM	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Choleretic 5 ml/man	
Dermatitigenic	
FLavor FEMA 1-30	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
Hypocholesterolemic	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.
Irritant	Merck 11th Edition
Percutaneostimulant	Seki, T., Toeda, C., Kawaguchi, T., Juni, K., Sugibayashi, K., and Morimoto, Y. 1990. Enhanced Transdermal Delivery of Zidovudine in Rats and Human Skin. Chem. Pharm. Bull. 38(11): 3086-3089, 1990.
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

NIACIN	Seed	35.0	38.0	-0.15	USDA's Ag Handbook 8 and sequelae)
--------	------	------	------	-------	------------------------------------

Activities (39)

Allergenic	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
AntiLyme 50 mg/day	
AntiMeniere's	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
AntiRaynaud's 1,500-4,000 mg/day	
Antiacrodynic	
Antiallergic 50 mg/2x/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antialzheimeran	
Antiamblyopic	
Antianginal	
Anticataract	
Antichilblain	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Anticonvulsant 3 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antidementia	
Antidermatitic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidiabetic	
Antidysphagic	
Antiepileptic 3 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antihangover 50 mg	
Antihistaminic 50 mg 2x/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antihyperactivity 1.5-6 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiinsomnic 1 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antineuralgic	
Antiparkinsonian 100 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antipellagric	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antiscotomic	
Antispasmodic 100 mg 2x/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antivertigo	
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Cardioprotective	
Circulotonic	
Fibrinolytic	
Hepatoprotective	
Hepatotoxic	
Hypocholesterolemic 50-100 mg 3x/day	
Hypoglycemic	
Hypolipidemic	
Sedative	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Serotoninerbic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Vasodilator	Martindale's 29th

OLEIC-ACID Seed 179000.0 191835.0 0.6 USDA's Ag Handbook 8 and sequelae)

Activities (18)					
5-Alpha-Reductase-Inhibitor					
Allergenic					
Alpha-Reductase-Inhibitor					
Anemiagenic					
Antialopecic					
Antiandrogenic					
Antiinflammatory IC50=21 uM					
Antileukotriene-D4 IC50=21 uM					
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.				
Choleretic 5 ml/man					
Dermatitigenic					
FLavor FEMA 1-30	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Hypocholesterolemic	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)				
Insectifuge	Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.				
Irritant	Merck 11th Edition				
Percutaneostimulant	Seki, T., Toeda, C., Kawaguchi, T., Juni, K., Sugibayashi, K., and Morimoto, Y. 1990. Enhanced Transdermal Delivery of Zidovudine in Rats and Human Skin. Chem. Pharm. Bull. 38(11): 3086-3089, 1990.				
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Propecic					

PALMITIC-ACID Seed 36720.0 39350.0 0.11 USDA's Ag Handbook 8 and sequelae)

Activities (13)					
5-Alpha-Reductase-Inhibitor					
Antialopecic					
Antiandrogenic					
Antifibrinolytic	Economic & Medicinal Plant Research, 1: 53.				
Antioxidant IC40=60					
FLavor FEMA 1	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Hemolytic	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.				
Hypercholesterolemic	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)				
Lubricant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Nematicide	Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp.				
Pesticide					
Propecic					
Soap	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				

PALMITOLEIC-ACID Seed 2080.0 2230.0 -0.24 USDA's Ag Handbook 8 and sequelae)

Activities (2)					
5-Alpha-Reductase-Inhibitor					
Soap	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				

PHENYLALANINE Seed 9190.0 12800.0 0.15 *

Activities (7)					
AntiADD 587 mg/day/orl	Martindale's 29th				
Antidepressant 50-4,000 mg/day/man					
Antiparkinsonian 200-500 mg/day/man	Martindale's 28th				
Antisickling 690 ug/ml					
Antivilitigic 100 mg/kg/day/orl/man	Martindale's 29th				
Monoamine-Precursor	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).				
Tremorigenic 1,600-12,600 mg/man/day	Martindale's 28th				

PHOSPHORUS Seed 5080.0 5445.0 0.02 USDA's Ag Handbook 8 and sequelae)

Activities (4)					
Antiosteoporotic					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anxiolytic					
Immunostimulant					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Osteogenic					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.

PHYTOSTEROLS	Seed	1410.0	1510.0	-0.24	USDA's Ag Handbook 8 and sequelae)
--------------	------	--------	--------	-------	------------------------------------

Activities (2)					
Antiprostatotic					
Hypocholesterolemic					

POTASSIUM	Seed	5990.0	6420.0	-0.54	USDA's Ag Handbook 8 and sequelae)
-----------	------	--------	--------	-------	------------------------------------

Activities (14)					
Angiotensin-Receptor-Blocker					
Antiarrhythmic					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidepressant					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antifatigue					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antihypertensive					
Antispasmodic					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antistroke					
Anxiolytic					
Beta-Blocker					
Cardioprotective 3,000-5,000 mg					
Cardiotoxic 18,000 mg/man/day					
Diuretic					
Hypotensive					
Vasodilator					

PROLINE	Seed	12900.0	13900.0	0.5	*
---------	------	---------	---------	-----	---

PROTEIN	Seed	240000.0	356000.0	1.09	*
---------	------	----------	----------	------	---

PUFA	Seed	213430.0	228730.0	0.94	USDA's Ag Handbook 8 and sequelae)
------	------	----------	----------	------	------------------------------------

Activities (4)					
AntiMS					Martindale's 28th
Antiacne					Martindale's 28th
Antieczemic					Martindale's 28th
Antipolyneuritic					Martindale's 28th

RIBOFLAVIN	Seed	2.0	3.0	-0.2	USDA's Ag Handbook 8 and sequelae)
------------	------	-----	-----	------	------------------------------------

Activities (15)					
AntiLyme 50 mg/day					
Antiarabiflavinotic 2-10 mg/day orl					Martindale's 28th
Anticarpal-Tunnel 50 mg/day					Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticataract 15 mg/day					Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticephalagic					
Anticervicaldysplasic 1.6-10 mg/day					
Anticheilitic					
Antidecubitic					
Antiglossitic					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antikeratitic					
Antimigraine					
Antioxidant					
Antipellagic					
Antiphotophobic					Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Cancer-Preventive					Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.

SALICYLATES	Seed	5.0	6.0	-0.31	J. Amer. Diet. Ass. 85{8}:950.
-------------	------	-----	-----	-------	--------------------------------

Activities (7)					
Antianggregant	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.				
Antiinflammatory	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.				
Antipyretic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.				
Antiricosuric	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.				
Hyperglycemic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.				
Hypoglycemic	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.				
Uricosuric	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.				

SERINE	Seed	10190.0	15300.0	0.91	*
--------	------	---------	---------	------	---

Activities (1)					
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.				

SFA	Seed	77970.0	83560.0	0.24	USDA's Ag Handbook 8 and sequelae)
-----	------	---------	---------	------	------------------------------------

SODIUM	Seed	40.0	43.0	-0.65	USDA's Ag Handbook 8 and sequelae)
--------	------	------	------	-------	------------------------------------

Activities (1)					
Hypertensive	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.				

STEARIC-ACID	Seed	16720.0	17920.0	-0.18	USDA's Ag Handbook 8 and sequelae)
--------------	------	---------	---------	-------	------------------------------------

Activities (8)					
5-Alpha-Reductase-Inhibitor					
Cosmetic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
FLavor FEMA 2-4,000	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Hypocholesterolemic	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)				
Lubricant	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				
Perfumery	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry				
Propepic					
Suppository	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.				

THIAMIN	Seed	6.0	9.0	0.58	*
---------	------	-----	-----	------	---

Activities (31)

Analgesic 1-4 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
AntiLyme 50 mg	
Antialcoholic 50-100 mg/day	
Antialzheimeran 100-3,000 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antianorectic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antibackache 1-4 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiberiberi	
Anticanker	
Anticardiospasmic	
Anticataract	
Anticolitic	
Antidecubitic	
Antideliriant	
Antidementia	
Antidyspeptic	
Antiencephalopathic	Martindale's 29th
Antifatigue	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antigastritic	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Antihangover 50 mg	
Antiheartburn	
Antiherpetic	
Antimigraine	
Antimyocarditic	
Antineuralgic 1-4 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antineurasthenic	
Antineuritic	
Antineuropathic 50 mg	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antipoliomyelitic	
Insectifuge 75-150 mg/man/day	Martindale's 28th
Neuroprotective	
Pesticide	

THREONINE Seed 7610.0 8190.0 0.01 *

Activities (4)

Antioxidant?	
Antiulcer	Martindale's 29th
Essential	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
FLavor FEMA 1,000	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

TRYPTOPHAN Seed 3030.0 3250.0 -0.03 USDA's Ag Handbook 8 and sequelae)

Activities (29)	
Analgesic 750 mg/4x/day/orl/man	Martindale's 29th
Antianxiety 500-1,000 mg/meal	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antidementia 3 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antidepressant 1-3 g/3x/day/orl/man	Martindale's 29th
Antidyskinetic 2-8 g/orl/wmn/day	Martindale's 29th
Antihypertensive	J. Agri. & Food Chemistry, 36: 1079.
Antiinsomniac 1-3 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antimanic 12 g/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antimenopausal 6 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antimigraine 500 mg/man/4x/day	Martindale's 29th
Antioxidant 125 ug/ml	
Antiparkinsonian 2 g 3 x/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiphenylketonuric	Martindale's 29th
Antiprostaglandin 250 pg/ml	
Antipsychotic 12 g/man/day	Martindale's 29th
Antirheumatic	Martindale's 29th
Antiscoliotic	
Carcinogenic	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Essential	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Hypnotic	Martindale's 29th
Hypoglycemic	Economic & Medicinal Plant Research, 6: 157.
Hypotensive 3 g/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Insulinase-Inhibitor	Economic & Medicinal Plant Research, 6: 157.
Insulinotonic	J. Agri. & Food Chemistry, 36: 1079.
Monoamine-Precursor	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Prolactinogenic	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Sedative 3-10 g/man/day	
Serotoninerpic 6-12 g/day/orl/man	Martindale's 28th
Tumor-Promoter	J. Agri. & Food Chemistry, 36: 1079.

TYROSINE	Seed	8780.0	11400.0	0.85	*
----------	------	--------	---------	------	---

Activities (8)	
Antidepressant?	
Antiencephalopathic	Martindale's 29th
Antiparkinsonian 100 mg/kg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiphenylketonuric	Martindale's 29th
Antiulcer 256 mg scu	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Antiulcer 400 mg/kg ipr rat	Borchard, R. E., Barnes, C. D., and Eltherton, L. G. 1991. Drug Dosage in Laboratory Animals: A Handbook. (3rd Ed.) The Telford Press, Inc., P. O. Box 287, Caldwell NJ 07006.
Cancer-Preventive	Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.
Monoamine-Precursor	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

VALINE	Seed	12410.0	15300.0	0.41	*
--------	------	---------	---------	------	---

Activities (3)	
Antiencephalopathic	Martindale's 29th
Essential	
FLavor FEMA 1,000-2,000	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

WATER	Seed	56000.0	69750.0	-0.61	*
-------	------	---------	---------	-------	---

ZINC	Seed	42.0	46.0	0.02	USDA's Ag Handbook 8 and sequelae)
------	------	------	------	------	------------------------------------

Activities (77)	
ACE-Inhibitor	
Analgesic	
AntiBPH 25-60 mg/day	
AntiCrohn's	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
AntiHIV	
Antiacne 135 mg/day	

Antiacrodermatitic 8-34 mg/day/orl/chd	Martindale's 29th
Antialcoholic	
Antialoepic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antialzheimeran 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiangiogenic	
Antianorexic	Martindale's 29th
Antiarthritic 50 mg/3x/day/orl/man	
Anticanker 100 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticataract 30 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Anticoeliac	Martindale's 28th
Anticold 50 mg	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anticolitic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Anticoronary 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antidandruff	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antidementia	
Antidiabetic 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antidote (Cadmium)	Let's Live, May 1989.
Antidysgeuzic	
Antieczemic 150 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiencephalopathic	Martindale's 29th
Antiepileptic 100 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antifibrotic 30 mg	
Antifuruncular 45 mg/3x/day/man	Martindale's 28th
Antihangover 15 mg	
Antiherpetic? 25-60 mg/day	
Antiimpotence	Martindale's 29th
Antiinfective 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiinfertility 60 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antiinsomniac	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antileptic	Martindale's 29th
Antileukonychic	
Antilymphomic	
Antimaculitic	
Antimetastatic	
Antineuropathic	
Antinyctalopic	
Antiobesity 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antiosteoporotic	
Antiperiodontitic	
Antiplaque	Martindale's 29th
Antiprolactin	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antiprostatic 50 mg/man/day/orl	Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).
Antirheumatic	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Antiseptic 50 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antispare-Tire 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antistomatitic 50 mg/man/3x/day	Martindale's 28th
Antisyndrome-X 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antitinnitic 60-120 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Antitriglyceride 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Antiulcer 50 mg/3x/day/man	Martindale's 28th
Antiulcer 88 mg/rat/day/15 days	
Antiviral?	Martindale's 29th
Astringent	Martindale's 28th
Collagenic	
Copper-Antagonist	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Deodorant	Martindale's 29th
Detoxicant (Alcohol)	
Ergogenic	
Hypotensive 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Immunomodulator	

Immunostimulant	Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.
Immunosuppressant 300 mg/day/6 wks/orl/man	Martindale's 29th
Insulinogenic 30 mg/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Leptinogenic 30-60 mg/man/day	Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95
Mucogenic	Li, K.M. Effect of zinc sulphate on acetic acid-induced gastric ulceration in rats. J. Pharm. Pharmacol. 42: 657-659, 1990.
NF-kB-Inhibitor	
Pesticide	
Spermigenic 60 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Testosteronogenic 60 mg/day	Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.
Trichomonicide	Martindale's 29th
Vulnerary	Martindale's 28th