

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
(-)-5'-METHOXYSATIVAN	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
(S)-N-(3-HYDROXYPROPYL)-AZETIDINE-CARBOXYLIC-ACID	0	Sprout Seedling	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
10-METHOXY-MEDICARPIN	0	Plant	not available	not available	not available	Duke, 1992 *
11,12-DIMETHOXY-7-HYDROXYCOUMESTIN	0	Plant	not available	not available	not available	Duke, 1992 *
2-(4-HYDROXY-2-METHOXY-PHENYL)-6-METHOXY-BENZOFURAN-3-CARBOXYLIC-ACID	0	Root	not available	not available	not available	Duke, 1992 *
2-CARBOXYARABINITOL	0	Leaf	not available	19.0	-0.83	Duke, 1992 *
2-METHYL-PROPANOL	0	Essential Oil	not available	not available	not available	Duke, 1992 *
3',4',5-TRIHYDROXY-7-METHOXY-FLAVONE	0	Shoot	not available	not available	not available	Duke, 1992 *
3',4',7-TRIHYDROXYFLAVONE	0	Shoot	not available	not available	not available	Duke, 1992 *
3'-METHOXYCOUMESTROL	0	Plant	not available	not available	not available	Duke, 1992 *
3'-METHOXYCOUMESTROL	0	Shoot	not available	not available	not available	Duke, 1992 *
3-BETA-GALACTOSIDASE	0	Tissue Culture	not available	not available	not available	Duke, 1992 *
3-METHYL-BUTANOL	0	Essential Oil	not available	not available	not available	Duke, 1992 *
4',7-DIHYDROXYFLAVONE	0	Leaf	not available	not available	not available	Duke, 1992 *
4',7-DIHYDROXYFLAVONE	0	Plant	not available	not available	not available	Duke, 1992 *
4',7-DIHYDROXYFLAVONE	0	Root	not available	not available	not available	Duke, 1992 *
4',7-DIHYDROXYFLAVONE	0	Shoot	not available	not available	not available	Duke, 1992 *
4',7-DIHYDROXYFLAVONE	0	Tissue Culture	not available	not available	not available	Duke, 1992 *
4'-METHOXYCOUMESTROL	0	Shoot	not available	not available	not available	Duke, 1992 *
4'-O-METHYLCOUVESTROL	2	Plant	not available	not available	not available	Duke, 1992 *
4-O-METHYLCOUVESTROL	0	Plant	not available	not available	not available	Duke, 1992 *

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
<u>4-AMINO-BUTYRIC-ACID</u>	0	Root	not available	not available	not available	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
<u>7,5'-DIHYDROXY-2',3',4'-TRIMETHOXYISOFLAVAN</u>	0	Plant	not available	not available	not available	Duke, 1992 *
<u>7-HYDROXY-2',3',4'-TRIMETHOXYISOFLAVAN</u>	0	Plant	not available	not available	not available	Duke, 1992 *
<u>8-METHOXYSKIMESTROL</u>	0	Leaf	not available	not available	not available	Duke, 1992 *
<u>9-O-METHYLCOUMESTROL</u>	0	Wood	not available	not available	not available	Duke, 1992 *
<u>ACETONE</u>	3	Essential Oil	not available	not available	not available	Duke, 1992 *
<u>ADENINE</u>	11	Plant	not available	not available	not available	Duke, 1992 *
<u>ADENOSINE</u>	28	Plant	not available	not available	not available	Duke, 1992 *
<u>AESCULETIN</u>	32	Fruit	not available	140.0	not available	Duke, 1992 *
<u>AESCULETIN</u>	32	Plant	not available	not available	not available	Duke, 1992 *
<u>ALFALFONE</u>	0	Plant	not available	not available	not available	Duke, 1992 *
<u>ALFALONE</u>	0	Tissue Culture	not available	not available	not available	Duke, 1992 *
<u>ALPHA-CRYPTOXANTHIN</u>	2	Flower	not available	not available	not available	Duke, 1992 *
<u>ALPHA-SPINASTEROL</u>	2	Fruit	not available	37.0	not available	Duke, 1992 *
<u>ALPHA-SPINASTEROL</u>	2	Plant	not available	not available	not available	Duke, 1992 *
<u>ALPHA-TOCOPHEROL</u>	32	Leaf	not available	not available	not available	Duke, 1992 *
<u>ALPHA-TOCOPHEROL</u>	32	Plant	26.0	257.0	1.00	Duke, 1992 *
<u>ALUMINUM</u>	5	Plant	25.0	135.0	-0.49	Duke, 1992 *
<u>AMYLASE</u>	1	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
ANTHOCYANINS	30	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
APIGENIN	101	Shoot	not available	70.0	1.00	Duke, 1992 *
APIGENIN-7-O-BETA-D-GLUCURONIDE	0	Plant	not available	not available	not available	Duke, 1992 *
APS-SULFOTRANSFERASE	0	Leaf	not available	not available	not available	Duke, 1992 *
ARABINOSE	0	Plant	not available	not available	not available	Duke, 1992 *
ARGININE	14	Plant	not available	not available	not available	Duke, 1992 *
ASCORBIC-ACID	112	Leaf	not available	not available	not available	Duke, 1992 *
ASCORBIC-ACID	112	Plant	276.0	1470.0	-0.25	Duke, 1992 *
ASH	0	Plant	18800.0	100000.0	-0.38	Duke, 1992 *
ASH	0	Seed	44000.0	49830.0	0.06	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
ASPARAGINE	2	Seed	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
AUROXANTHIN	0	Flower	not available	not available	not available	Duke, 1992 *
AUROXANTHIN	0	Leaf	not available	not available	not available	Duke, 1992 *
AZUKISAPONIN-II	0	Shoot	not available	5.6	not available	Duke, 1992 *
AZUKISAPONIN-V	0	Shoot	not available	20.0	not available	Duke, 1992 *
BAYOGENIN	3	Leaf	not available	not available	not available	Duke, 1992 *
BENZOYL-(S),(-)-MALIC-ACID	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

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BENZOYLMESOTARTARIC-ACID	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
BETA-AMYRIN	9	Fruit	not available	15.0	not available	Duke, 1992 *
BETA-AMYRIN	9	Plant	not available	not available	not available	Duke, 1992 *
BETA-AMYRIN	9	Seed Essent. Oil	not available	not available	not available	Duke, 1992 *
BETA-CAROTENE	53	Flower	not available	not available	not available	Duke, 1992 *
BETA-CAROTENE	53	Leaf	0.1	394.0	0.58	Duke, 1992 *
BETA-CAROTENE	53	Plant	28.0	149.0	0.08	Duke, 1992 *
BETA-CAROTENE-5,6-EPOXIDE	0	Leaf	not available	not available	not available	Duke, 1992 *
BETA-CRYPTOXANTHIN	2	Leaf	not available	not available	not available	Duke, 1992 *
BETA-IONONE	13	Leaf	not available	not available	not available	Duke, 1992 *
BETA-MANNANASE	0	Seed	not available	not available	not available	Duke, 1992 *
BETA-SITOSTEROL	47	Fruit	not available	5.0	-0.79	Duke, 1992 *
BETA-SITOSTEROL	47	Plant	not available	not available	not available	Duke, 1992 *
BETA-SITOSTEROL	47	Seed	not available	not available	not available	Duke, 1992 *
BETA-SITOSTEROL	47	Seed Oil	not available	not available	not available	Duke, 1992 *
BETA-SPINASTEROL	0	Fruit	not available	19.0	not available	Duke, 1992 *
BETA-SPINASTEROL	0	Plant	not available	not available	not available	Duke, 1992 *
BETAIN	14	Plant	not available	not available	not available	Duke, 1992 *
BIOCHANIN-A	32	Leaf	not available	not available	not available	Duke, 1992 *
BIOCHANIN-A	32	Plant	not available	not available	not available	Duke, 1992 *
BIOCHANIN-A	32	Shoot	not available	not available	not available	Duke, 1992 *
BIOTIN	4	Plant	not available	0.2	-1.00	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

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BORON	4	Leaf	not available	25.0	-0.99	Duke, 1992 *
BORON	4	Plant	17.0	45.0	-0.36	Duke, 1992 *
BORON	4	Stem	not available	14.0	-1.24	Duke, 1992 *
BUTANONE	0	Essential Oil	not available	not available	not available	Duke, 1992 *
CAFFEIC-ACID	102	Tissue Culture	not available	not available	not available	Duke, 1992 *
CALCIUM	28	Plant	1690.0	8990.0	-0.49	Duke, 1992 *
CAMPESTEROL	2	Plant	not available	not available	not available	Duke, 1992 *
CANALINE	2	Seed	not available	not available	not available	Duke, 1992 *
CANAVANINE	0	Seed	not available	6000.0	not available	Duke, 1992 *
CANAVANINE	14	Seed	not available	not available	not available	Duke, 1992 *
CAPROIC-ACID	1	Seed	not available	not available	not available	Duke, 1992 *
CARBOHYDRATES	0	Plant	123704.0	658000.0	-0.09	Duke, 1992 *
CARBOHYDRATES	0	Seed	401000.0	454135.0	-0.28	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
CAULOSAPONIN-B	0	Root	not available	10.0	not available	Duke, 1992 *
CEREBROSIDES	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
CHLOROPHYLL	21	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

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CHLOROPHYLLIDE-A	0	Plant	not available	not available	not available	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
CHOLINE	20	Plant	not available	not available	not available	Duke, 1992 *
CHOLINE	20	Shoot	not available	1710.0	1.52	Duke, 1992 *
CHOLINE	20	Tissue Culture	not available	not available	not available	Duke, 1992 *
CHROMIUM	24	Plant	0.2	0.9	-0.78	Duke, 1992 *
CHRYSOERIOL	7	Shoot	not available	28.0	-0.22	Duke, 1992 *
CHRYSOERIOL-7-DIGLUCURONIDE	0	Plant	not available	not available	not available	Duke, 1992 *
CHRYSOERIOL-7-GLUCURONIDE	0	Plant	not available	not available	not available	Duke, 1992 *
CHRYSOERIOL-7-TRIGLUCURONIDE	0	Plant	not available	not available	not available	Duke, 1992 *
CINNAMIC-ACID	18	Tissue Culture	not available	not available	not available	Duke, 1992 *
CITRIC-ACID	23	Plant	not available	not available	not available	Duke, 1992 *
CITRULLINE	5	Shoot	not available	not available	not available	Duke, 1992 *
COAGULASE	0	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
COBALT	2	Plant	2.0	11.5	-0.10	Duke, 1992 *
COUMESTROL	13	Leaf	not available	not available	not available	Duke, 1992 *
COUMESTROL	13	Plant	10.0	184.0	not available	Duke, 1992 *
COUMESTROL	13	Root	not available	not available	not available	Duke, 1992 *
COUMESTROL	13	Shoot	5.0	190.0	-0.22	Duke, 1992 *
COUMESTROL	13	Sprout Seedling	5.0	37.0	not available	Duke, 1992 *
COUMESTROL-O-GLUCOSIDE	0	Leaf	not available	not available	not available	Duke, 1992 *

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CRYPTOXANTHIN	2	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
CYCLOARTENOL	7	Plant	not available	not available	not available	Duke, 1992 *
CYSTINE	2	Plant	not available	not available	not available	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
CYTIDINE	0	Plant	not available	not available	not available	Duke, 1992 *
D-GLYCERO-D-MANNO-OCTULOSE	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
DAIDZEIN	32	Plant	not available	not available	not available	Duke, 1992 *
DAIDZEIN	32	Shoot	not available	not available	not available	Duke, 1992 *
DAIDZEN	4	Plant	not available	not available	not available	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
DAPHNORETIN	2	Plant	not available	not available	not available	Duke, 1992 *
DEHYDRO-SOYASAPONIN-I	0	Shoot	not available	20.0	not available	Duke, 1992 *
DIOSGENIN	7	Seed	not available	1000.0	-0.71	Duke, 1992 *
EREPSIN	0	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
ESCULETIN	30	Fruit	not available	140.0	not available	Duke, 1992 *

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ESCULETIN	30	Plant	not available	not available	not available	Jim Duke's personal files.
FAT	0	Plant	8084.0	43000.0	-0.13	Duke, 1992 *
FAT	0	Seed	101000.0	123000.0	-0.75	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
FERREDOXINS	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
FERULIC-ACID	61	Leaf	not available	not available	not available	Duke, 1992 *
FERULIC-ACID	61	Tissue Culture	not available	not available	not available	Duke, 1992 *
FIBER	15	Plant	31000.0	423000.0	1.48	Duke, 1992 *
FIBER	15	Seed	81000.0	91732.0	-0.34	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
FIBER(CRUDE)	0	Plant	not available	210000.0	1.96	Duke, 1992 *
FIBER(DIETARY)	0	Plant	not available	423000.0	0.64	Duke, 1992 *
FLAVOXANTHIN	0	Leaf	not available	not available	not available	Duke, 1992 *
FOLACIN	15	Plant	not available	not available	not available	Duke, 1992 *
FOLIC-ACID	23	Plant	not available	not available	not available	Duke, 1992 *
FORMONONETIN	16	Leaf	not available	not available	not available	Duke, 1992 *
FORMONONETIN	16	Plant	not available	not available	not available	Duke, 1992 *
FORMONONETIN	16	Root	not available	not available	not available	Duke, 1992 *
FORMONONETIN	16	Shoot	not available	not available	not available	Duke, 1992 *
FORMONONETIN-7-O-(6"-O-MALONYL-GLUCOSIDE)	0	Root	not available	not available	not available	Duke, 1992 *
FORMONONETIN-7-O-GLUCOSIDE	0	Leaf	not available	not available	not available	Duke, 1992 *
FRUCTOSE	8	Plant	not available	not available	not available	Duke, 1992 *

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FUMARIC-ACID	7	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
GALACTOMANNAN	0	Seed	not available	not available	not available	Duke, 1992 *
GALACTOSE	1	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
GENISTEIN	81	Leaf	not available	not available	not available	Duke, 1992 *
GENISTEIN	81	Plant	not available	not available	not available	Duke, 1992 *
GENISTEIN	81	Shoot	not available	not available	not available	Duke, 1992 *
GERANIOL	35	Leaf	not available	not available	not available	Duke, 1992 *
GLUCOSE	7	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
GLUCURONIC-ACID	4	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
GLYCINE-BETAIN	0	Leaf	not available	not available	not available	Duke, 1992 *
GUANINE	1	Plant	not available	not available	not available	Duke, 1992 *
GUANOSINE	0	Plant	not available	not available	not available	Duke, 1992 *
HEDERAGENIN	9	Leaf	not available	not available	not available	Duke, 1992 *
HEDERAGENIN	9	Plant	not available	not available	not available	Duke, 1992 *
HEDERAGENIN	9	Shoot	not available	not available	not available	Duke, 1992 *

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HENTRIACONTANE	0	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
HISTIDINE	7	Plant	not available	not available	not available	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
HYDROGEN-CYANIDE	0	Plant	not available	not available	not available	Duke, 1992 *
HYDROXY-PROLINE-BETAINE	0	Leaf	not available	not available	not available	Duke, 1992 *
HYDROXYFORMONONETIN	0	Plant	not available	not available	not available	Duke, 1992 *
HYPEROSIDE	30	Seed	not available	not available	not available	Duke, 1992 *
HYPOXANTHINE	0	Plant	not available	not available	not available	Duke, 1992 *
INOSINE	8	Plant	not available	not available	not available	Duke, 1992 *
INOSITOL	8	Plant	not available	not available	not available	Duke, 1992 *
INVERTASE	0	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
IRON	6	Plant	4.9	26.0	-0.71	Duke, 1992 *
ISO-PALMITIC-ACID	0	Seed	not available	not available	not available	Duke, 1992 *
ISO-PENTADECANOIC-ACID	0	Seed	not available	not available	not available	Duke, 1992 *
ISOCYTOSINE	0	Plant	not available	not available	not available	Duke, 1992 *
ISOLEUCINE	3	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

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KAEMPFEROL	75	Flower	not available	not available	not available	Duke, 1992 *
KAEMPFEROL-7-O-ALPHA-L-RHAMNOSIDE	0	Leaf	not available	not available	not available	Duke, 1992 *
KAEMPFEROL-7-O-BETA-D-GLUCURONIDE	0	Leaf	not available	not available	not available	Duke, 1992 *
L-ARGININE	1	Plant	not available	not available	not available	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
L-CANAVANINE	0	Leaf	900.0	1200.0	not available	Duke, 1992 *
L-CANAVANINE	0	Seed	8.0	15000.0	not available	Duke, 1992 *
L-CANAVANINE	0	Sprout Seedling	600.0	900.0	not available	Duke, 1992 *
L-CANAVANINE	0	Stem	600.0	900.0	not available	Duke, 1992 *
L-HOMOSTACHYDRINE	1	Seed	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
L-STACHYDRINE	0	Hay	not available	1400.0	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
L-STACHYDRINE	0	Plant	not available	not available	not available	Duke, 1992 *
LARICYTRIN	0	Flower	not available	not available	not available	Duke, 1992 *
LAURIC-ACID	7	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
LAURIC-ACID	7	Seed	not available	not available	not available	Duke, 1992 *

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LEUCINE	2	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
LICODIONE	0	Tissue Culture	not available	not available	not available	Duke, 1992 *
LIMONENE	60	Essential Oil	not available	not available	not available	Duke, 1992 *
LINOLEIC-ACID	27	Seed Oil	not available	not available	not available	Duke, 1992 *
LINOLENIC-ACID	0	Seed Oil	not available	not available	not available	Duke, 1992 *
LIQUIRITGENIN	0	Plant	not available	not available	not available	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
LUCERNIC-ACID	0	Leaf	not available	not available	not available	Duke, 1992 *
LUCERNOL	0	Plant	not available	not available	not available	Duke, 1992 *
LUCERNOL	0	Shoot	not available	not available	not available	Duke, 1992 *
LUTEIN	15	Flower	not available	not available	not available	Duke, 1992 *
LUTEIN	15	Leaf	not available	not available	not available	Duke, 1992 *
LUTEIN	15	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
LUTEIN-5,6-EPOXIDE	0	Flower	not available	not available	not available	Duke, 1992 *
LUTEIN-5,6-EPOXIDE	0	Leaf	not available	not available	not available	Duke, 1992 *
LUTEOXANTHIN	0	Leaf	not available	not available	not available	Duke, 1992 *
LYSINE	4	Plant	not available	not available	not available	Duke, 1992 *
MAGNESIUM	65	Plant	432.0	2300.0	-0.55	Duke, 1992 *

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MALEIC-ACID	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
MALIC-ACID	15	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
MALONIC-ACID	1	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
MANGANESE	14	Plant	0.5	2.5	-0.68	Duke, 1992 *
MANNO-HEPTULOSE	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
MEDICAGENIC-ACID	7	Leaf	not available	not available	not available	Duke, 1992 *
MEDICAGENIC-ACID	7	Plant	320.0	600.0	not available	Duke, 1992 *
MEDICAGENIC-ACID	7	Root	not available	not available	not available	Duke, 1992 *
MEDICAGENIC-ACID	7	Pt	not available	not available	not available	Duke, 1992 *
MEDICAGENIC-ACID-3-BETA-O-BETA-MALTOSIDE	0	Root	not available	not available	not available	Duke, 1992 *
MEDICAGENIC-ACID-3-O-BETA-D-GLUCOPYRANOSIDE	0	Root	1200.0	87878.8	not available	Duke, 1992 *
MEDICAGENIC-ACID-3-O-BETA-D-GLUCOSIDE	0	Root	not available	not available	not available	Duke, 1992 *
MEDICAGENIC-ACID-3-O-TRIGLUCOSIDE	0	Root	not available	not available	not available	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
MEDICAGO-GUCURONOXYLAN	0	Stem	not available	not available	not available	Duke, 1992 *
MEDICAGOL	3	Leaf	not available	not available	not available	Duke, 1992 *
MEDICAGOL	3	Plant	not available	not available	not available	Duke, 1992 *
MEDICAGOL	3	Shoot	not available	6.0	1.00	Duke, 1992 *
MEDICANINE	0	Sprout Seedling	not available	not available	not available	Duke, 1992 *
MEDICARPIN	13	Leaf	not available	not available	not available	Duke, 1992 *
MEDICARPIN	13	Root	not available	not available	not available	Duke, 1992 *
MEDICARPIN	13	Sprout Seedling	not available	not available	not available	Duke, 1992 *
MEDICARPIN	13	Tissue Culture	not available	not available	not available	Duke, 1992 *
MEDICARPIN-3-O-GLYCOSIDE	0	Root	not available	not available	not available	Duke, 1992 *
MEDICARPIN-BETA-D-GLUCOSIDE	0	Root	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
MEDICOSIDE	1	Plant	not available	not available	not available	Duke, 1992 *
MEDICOSIDE-A	0	Root	not available	48.0	not available	Duke, 1992 *
MEDICOSIDE-C	0	Root	20.0	100.0	not available	Duke, 1992 *
MEDICOSIDE-D	0	Root	not available	6060.6	not available	Duke, 1992 *
MEDICOSIDE-G	0	Root	0.0	132.0	not available	Duke, 1992 *
MEDICOSIDE-H	0	Root	not available	51.0	not available	Duke, 1992 *
MEDICOSIDE-I	0	Root	not available	231.2	not available	Duke, 1992 *
MEDICOSIDE-J	0	Root	103.6	104.0	not available	Duke, 1992 *
MEDICOSIDE-L	0	Root	not available	120.0	not available	Duke, 1992 *
METHIONINE	15	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
MOLYBDENUM	2	Leaf	not available	0.0	-1.04	Duke, 1992 *

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
MOLYBDENUM	2	Stem	not available	0.0	-0.80	Duke, 1992 *
MUTATOCHROME	0	Leaf	not available	not available	not available	Duke, 1992 *
MYRICETIN	34	Flower	not available	not available	not available	Duke, 1992 *
MYRISTIC-ACID	6	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
MYRISTONE	0	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
MYRSELINOL	0	Plant	not available	not available	not available	Duke, 1992 *
MYSELLINOL	0	Fruit	not available	60.0	not available	Duke, 1992 *
N-6-METHYLAGMATINE	0	Seed	not available	not available	not available	Duke, 1992 *
NEOCHROME	0	Flower	not available	not available	not available	Duke, 1992 *
NEOCHROME	0	Leaf	not available	not available	not available	Duke, 1992 *
NEOXANTHIN	2	Leaf	not available	not available	not available	Duke, 1992 *
NEOXANTHIN	2	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
NIACIN	39	Plant	18.0	97.0	0.28	Duke, 1992 *
NICOTIANAMINE	1	Plant	not available	not available	not available	Duke, 1992 *
NICOTIANAMINE	1	Shoot	not available	not available	not available	Duke, 1992 *
NONACOSANE	2	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
NOR-SPERMIDINE	0	Shoot	not available	15.0	not available	Duke, 1992 *
NOR-SPERMINE	0	Shoot	not available	98.0	not available	Duke, 1992 *
OCTACOSANOL	6	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
OLEIC-ACID	18	Seed	not available	not available	not available	Duke, 1992 *
OLEIC-ACID	18	Seed Oil	not available	not available	not available	Duke, 1992 *
ONONIN	2	Leaf	not available	not available	not available	Duke, 1992 *
OXALIC	0	Plant	not available	not available	not available	Duke, 1992 *
OXALIC-ACID	9	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
P-COUMARIC-ACID	25	Leaf	not available	not available	not available	Duke, 1992 *
P-COUMARIC-ACID	25	Tissue Culture	not available	not available	not available	Duke, 1992 *
PALMITIC-ACID	13	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
PALMITIC-ACID	13	Seed	not available	not available	not available	Duke, 1992 *
PALMITIC-ACID	13	Seed Oil	not available	not available	not available	Duke, 1992 *
PANTOTHENIC	0	Plant	not available	not available	not available	Duke, 1992 *
PANTOTHENIC-ACID	11	Plant	2.0	18.0	-0.69	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
PECTIN	24	Plant	not available	not available	not available	Duke, 1992 *

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
<u>PECTIN-METHYL-ESTERASE</u>	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<u>PECTINASE</u>	1	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<u>PENTANAL</u>	0	Essential Oil	not available	not available	not available	Duke, 1992 *
<u>PEROXIDASE</u>	0	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<u>PHAEOPHORBIDE-A</u>	0	Plant	not available	not available	not available	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
<u>PHENYLALANINE</u>	7	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<u>PHOSPHORUS</u>	4	Plant	282.0	1500.0	-1.00	Duke, 1992 *
<u>PHYLLOQUINONE</u>	5	Plant	not available	not available	not available	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
PHYTOFLUENE	0	Leaf	not available	not available	not available	Duke, 1992 *
PHYTOHEMAGGLUTININ	0	Seed	not available	not available	not available	Duke, 1992 *
PINITOL	5	Shoot	not available	not available	not available	Duke, 1992 *
PIPECOLATE-BETAINE	0	Leaf	not available	not available	not available	Duke, 1992 *
PLASTOCYANINS	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
POPULNIN	0	Leaf	not available	not available	not available	Duke, 1992 *
POTASSIUM	14	Plant	2256.0	12000.0	-0.68	Duke, 1992 *
PROLINE-BETAINE	0	Leaf	not available	not available	not available	Duke, 1992 *
PROPANAL	0	Plant	not available	not available	not available	Duke, 1992 *
PROTEIN	0	Leaf	60000.0	347000.0	1.35	Duke, 1992 *
PROTEIN	0	Plant	37412.0	199000.0	0.21	Duke, 1992 *
PROTEIN	0	Seed	332000.0	385000.0	1.35	Duke, 1992 *
PROTEIN	0	Shoot	not available	not available	not available	Duke, 1992 *
PURINES	0	Seed	not available	not available	not available	Duke, 1992 *
PYRIDOXINE	43	Plant	not available	not available	not available	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
PYRO-GLU-TYR-PRO	0	Leaf	not available	not available	not available	Duke, 1992 *
QUERCETIN	176	Flower	not available	not available	not available	Duke, 1992 *
QUINIC-ACID	1	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
RHAMNOSE	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
RIBOFLAVIN	15	Plant	2.7	14.2	0.19	Duke, 1992 *
RIBOSE	0	Plant	not available	not available	not available	Duke, 1992 *
SALICYLATES	7	Shoot	7.0	35.0	not available	Duke, 1992 *
SALICYLIC-ACID	34	Shoot	not available	not available	not available	Duke, 1992 *
SAPONIN	0	Plant	5000.0	20000.0	-0.46	Duke, 1992 *
SAPONINS	5	Plant	5000.0	20000.0	not available	Duke, 1992 *
SAPONINS	5	Seed	not available	3000.0	-0.46	Duke, 1992 *
SAPONINS	5	Sprout Seedling	1100.0	80000.0	not available	Duke, 1992 *
SATIVAN	2	Leaf	not available	not available	not available	Duke, 1992 *
SATIVAN	2	Sprout Seedling	not available	not available	not available	Duke, 1992 *
SATIVANONE	0	Leaf	not available	not available	not available	Duke, 1992 *
SATIVOL	0	Leaf	not available	not available	not available	Duke, 1992 *
SATIVOL	0	Plant	not available	not available	not available	Duke, 1992 *
SCOPOLETIN	0	Shoot	not available	68.0	not available	Duke, 1992 *
SCOPOLETIN	44	Fruit	not available	120.0	1.40	Duke, 1992 *
SCOPOLETIN	44	Plant	not available	not available	not available	Duke, 1992 *
SELENIUM	60	Leaf	not available	0.0	-0.38	Duke, 1992 *
SELENIUM	60	Plant	not available	0.0	-0.43	Duke, 1992 *
SELENIUM	60	Stem	not available	0.0	-0.43	Duke, 1992 *
SHIKIMIC-ACID	14	Plant	not available	not available	not available	Duke, 1992 *
SILICON	4	Plant	not available	not available	not available	Duke, 1992 *
SODIUM	1	Plant	32.0	170.0	-0.29	Duke, 1992 *
SOYASAPOPENOL-A	0	Leaf	not available	not available	not available	Duke, 1992 *
SOYASAPOPENOL-A	0	Plant	not available	not available	not available	Duke, 1992 *
SOYASAPOPENOL-B	0	Leaf	not available	not available	not available	Duke, 1992 *
SOYASAPOPENOL-B	0	Petiole	not available	not available	not available	Duke, 1992 *

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
<u>SOYASAPOPENOL-B</u>	0	Plant	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-B</u>	0	Root	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-B</u>	0	Shoot	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-C</u>	0	Leaf	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-C</u>	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<u>SOYASAPOPENOL-C</u>	0	Root	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-C</u>	0	Shoot	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-D</u>	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<u>SOYASAPOPENOL-D</u>	0	Root	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-D</u>	0	Shoot	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-E</u>	0	Leaf	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-E</u>	0	Plant	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-E</u>	0	Root	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-E</u>	0	Shoot	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-F</u>	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<u>SOYASAPOPENOL-F</u>	0	Root	not available	not available	not available	Duke, 1992 *
<u>SOYASAPOPENOL-F</u>	0	Shoot	not available	not available	not available	Duke, 1992 *

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
<u>SOYASAPOPENOLS</u>	0	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<u>SOYASAPONIN-I</u>	0	Seed	not available	700.0	-1.00	Duke, 1992 *
<u>SOYASAPONIN-I</u>	0	Shoot	not available	192.2	-1.00	Duke, 1992 *
<u>SOYASAPONIN-VI</u>	0	Seed	not available	1000.0	not available	Duke, 1992 *
<u>SPHINGOSINES</u>	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<u>STACHYDRINE</u>	6	Seed	not available	not available	not available	Duke, 1992 *
<u>STACHYOSE</u>	1	Seed	not available	not available	not available	Duke, 1992 *
<u>STARCH</u>	5	Plant	11280.0	60000.0	-0.99	Duke, 1992 *
<u>STEARIC-ACID</u>	8	Seed Oil	not available	not available	not available	Duke, 1992 *
<u>STIGMASTEROL</u>	12	Fruit	not available	40.0	-0.62	Duke, 1992 *
<u>STIGMASTEROL</u>	12	Plant	not available	not available	not available	Duke, 1992 *
<u>SUCCINIC-ACID</u>	7	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<u>SUCROSE</u>	14	Plant	not available	not available	not available	Duke, 1992 *
<u>SUGARS</u>	0	Plant	16920.0	90000.0	-0.25	Duke, 1992 *
<u>TANNIN</u>	35	Hay	27000.0	28000.0	not available	Duke, 1992 *
<u>THIAMIN</u>	31	Plant	1.3	7.5	-0.01	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<u>THIAMINE</u>	0	Plant	0.4	1.9	-0.47	Duke, 1992 *

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
THREONINE	4	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
TIN	4	Plant	not available	not available	not available	Duke, 1992 *
TRANS-CINNAMIC-ACID	0	Tissue Culture	not available	not available	not available	Duke, 1992 *
TRANS-COUMARIC-ACID	0	Tissue Culture	not available	not available	not available	Duke, 1992 *
TRIACONTAN-1-OL	1	Shoot	not available	not available	not available	Duke, 1992 *
TRIACONTANE	0	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
TRIACONTANOL	3	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
TRICIN	9	Fruit Juice	not available	2200.0	not available	Duke, 1992 *
TRICIN	9	Plant	not available	not available	not available	Duke, 1992 *
TRICIN	9	Shoot	not available	24.4	not available	Duke, 1992 *
TRICIN-7-DIGLUCURONIDE	0	Plant	not available	not available	not available	Duke, 1992 *
TRICIN-7-GLUCURONIDE	0	Plant	not available	not available	not available	Duke, 1992 *
TRICIN-7-TRIGLUCURONIDE	0	Plant	not available	not available	not available	Duke, 1992 *
TRIFOLIOL	0	Leaf	not available	not available	not available	Duke, 1992 *
TRIFOLIOL	0	Plant	not available	not available	not available	Duke, 1992 *
TRIFOLIOL	0	Shoot	not available	20.0	not available	Duke, 1992 *
TRIGALACTOSYL-DIGLYCERIDE	0	Leaf	not available	58.0	not available	Duke, 1992 *
TRIGONELLINE	15	Plant	not available	not available	not available	Duke, 1992 *
TRIGONELLINE	15	Seed	not available	not available	not available	Duke, 1992 *

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
TRIMETHYLAMINE	1	Plant	not available	not available	not available	Duke, 1992 *
TRYPTOPHAN	29	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
VALINE	3	Plant	not available	not available	not available	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
VESTITOL	4	Sprout Seedling	not available	not available	not available	Duke, 1992 *
VESTITONE	2	Plant	not available	not available	not available	Duke, 1992 *
VIOLAXANTHIN	2	Leaf	not available	not available	not available	Duke, 1992 *
VIOLAXANTHIN	2	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
VIT-E	0	Plant	not available	not available	not available	Duke, 1992 *
VIT-K	0	Plant	not available	not available	not available	Duke, 1992 *
VITAMIN-A	0	Leaf	not available	not available	not available	Duke, 1992 *
VITAMIN-D	0	Leaf	not available	not available	not available	Duke, 1992 *
VITAMIN-D-2	0	Shoot	not available	0.0	not available	Duke, 1992 *
VITAMIN-D-3	0	Shoot	not available	0.0	not available	Duke, 1992 *
VITAMIN-E	75	Plant	not available	not available	not available	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
VITAMIN-K	1	Plant	not available	not available	not available	Duke, 1992 *
WAIROL	0	Leaf	not available	not available	not available	Duke, 1992 *
WATER	0	Plant	not available	812000.0	0.18	Duke, 1992 *

Chemical Name	Activity Count	Plant Part	Low Parts Per Million	High Parts Per Million	Standard Deviation	Reference
<u>WATER</u>	0	Seed	not available	117000.0	-0.42	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<u>XANTHOPHYLLS</u>	0	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<u>XYLOSE</u>	3	Plant	not available	not available	not available	Duke, 1992 *
<u>ZANHIC-ACID</u>	0	Leaf	not available	not available	not available	Duke, 1992 *
<u>ZEAXANTHIN</u>	5	Flower	not available	not available	not available	Duke, 1992 *
<u>ZEAXANTHIN</u>	5	Leaf	not available	not available	not available	Duke, 1992 *
<u>ZEAXANTHIN</u>	5	Plant	not available	not available	not available	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<u>ZEINOXANTHIN</u>	0	Shoot	not available	not available	not available	Duke, 1992 *
<u>ZETA-CAROTENE</u>	0	Flower	not available	not available	not available	Duke, 1992 *
<u>ZINC</u>	77	Plant	not available	not available	not available	Duke, 1992 *