

# A Glutathionigenic

\*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.

Plant	# Chemicals	Total PPM
<i>Abelmoschus esculentus</i> Okra	2	4200.0
<i>Acacia farnesiana</i> Popinac; Opopanax; Cassie; Sweet Acacia; Huisache	1	8120.0
<i>Achillea millefolium</i> Yarrow; Milfoil	1	
<i>Acinos suaveolens</i>	1	
<i>Aegle marmelos</i> Bael fruit; Bael de India	1	
<i>Albizia lebeck</i> Lebbek; Women's-Tongue Tree; East Indian Walnut; Frywood; Siris Tree; Koko; Lebbek Tree	1	
<i>Allium schoenoprasum</i> Chives	1	7600.0
<i>Allium sativum</i> var. <i>sativum</i> Garlic	2	11724.0
<i>Allium cepa</i> Onion; Shallot	1	2180.0
<i>Allium ampeloprasum</i> Elephant Garlic; Kurrat	1	
<i>Aloysia citrodora</i> Lemon Verbena	2	8190.0
<i>Alpinia galanga</i> Siamese Ginger; Languas; Greater Galangal	1	
<i>Amaranthus</i> sp. Pigweed	1	8662.0
<i>Anacardium occidentale</i> Cashew	1	5574.0
<i>Ananas comosus</i> Pineapple	1	1630.0
<i>Anastatica hierochuntica</i> Jericho Rose	1	
<i>Anethum graveolens</i> Garden Dill; Dill	1	3098.0
<i>Angelica sinensis</i> Dong Gui; Dang Quai; Dang Qui; Dong Quai; Chinese Angelica; Dang Gui	1	
<i>Anisomeles malabarica</i> Malabar Catmint	1	
<i>Annona squamosa</i> Sweetsop; Sugar-Apple	1	520.0
<i>Annona reticulata</i> Custard Apple	1	280.0
<i>Annona muricata</i> Soursop	1	740.0
<i>Apium graveolens</i> Celery	1	2240.0
<i>Arachis hypogaea</i> Peanut; Groundnut	1	6860.0
<i>Arctium lappa</i> Gobo; Great Burdock; Burdock	1	900.0
<i>Artemisia dracunculus</i> Tarragon	1	
<i>Artocarpus altilis</i> Breadfruit	1	680.0
<i>Asimina triloba</i> Pawpaw	1	1672.0
<i>Asparagus officinalis</i> Asparagus	1	7484.0
<i>Avena sativa</i> Oats	1	12000.0
<i>Averrhoa carambola</i> Star Fruit; Carambola	1	
<i>Basella alba</i> Vinespinach	1	5510.0
<i>Benincasa hispida</i> Waxgourd	1	1540.0
<i>Bertholletia excelsa</i> Creamnut; Brazilnut; Paranut; Brazilnut-Tree	1	20692.0
<i>Beta vulgaris</i> Garden Beet; Beet; Beetroot; Sugar Beet	1	2682.0
<i>Bixa orellana</i> Annatto; Lipsticktree; Arnato; Bija; Annato; Annoto; Lipstick Pod; Achiote	1	3320.0
<i>Brassica rapa</i> Seven-Top Turnip; Rapini; Turnip	1	2700.0
<i>Brassica oleracea</i> var. <i>viridis</i> l. Tree Kale; Spring-Heading Cabbage; Cow Cabbage; Collards; Tall Kale	1	6884.0
<i>Brassica oleracea</i> var. <i>sabellica</i> l. Curly Kale; Scotch Kale; Kitchen Kale; Kale	1	4120.0

Plant	# Chemicals	Total PPM
<i>Brassica oleracea</i> var. <i>italica</i> Sprouting Broccoli; Calabrese; Broccoli; Purple Cauliflower; Winter Broccoli; Heading Broccoli; Cape Broccoli; Asparagus Broccoli	1	
<i>Brassica oleracea</i> var. <i>gemmifera</i> Brussel-Sprout; Brussels-Sprouts	1	4570.0
<i>Brassica oleracea</i> var. <i>capitata</i> I. Red Cabbage; Cabbage; White Cabbage	1	3208.0
<i>Brassica oleracea</i> var. <i>botrytis</i> I. Cauliflower	1	14534.0
<i>Brassica oleracea</i> Kohlrabi	1	2890.0
<i>Brassica nigra</i> Black Mustard	1	6774.0
<i>Brassica napus</i> var. <i>napobrassica</i> Swedish Turnip; Rutabaga; Swede	1	1930.0
<i>Brassica chinensis</i> Pak-Choi; Chinese Cabbage; Celery Mustard; Celery Cabbage; Chinese White Cabbage; Bok-Choy; Chinese Mustard	1	3846.0
<i>Cajanus cajan</i> Pigeonpea	1	5440.0
<i>Calathea allouia</i> Lleren; Leren	1	
<i>Camellia sinensis</i> Tea	1	
<i>Capsella bursa-pastoris</i> Shepherd's Purse	1	
<i>Capsicum frutescens</i> Cayenne; Tabasco; Hot Pepper; Red Chili; Spur Pepper; Chili	1	3916.0
<i>Capsicum annuum</i> Sweet Pepper; Bell Pepper; Cherry Pepper; Paprika; Green Pepper; Cone Pepper	1	2728.0
<i>Carica papaya</i> Papaya	1	358.0
<i>Carum carvi</i> Comino de prado (Sp.); Carum; Comino (Sp.); Kummel (Ger.); Caraway	2	
<i>Castanea sativa</i> European Chestnut	1	2056.0
<i>Castanea mollissima</i> Chinese Chestnut	1	3608.0
<i>Castanea dentata</i> American Chestnut	1	3178.0
<i>Ceratonia siliqua</i> Locust Bean; Carob; St.John's-Bread	1	9400.0
<i>Chenopodium album</i> Lambsquarter	1	6242.0
<i>Chrysophyllum cainito</i> Caimito; Star Apple	1	
<i>Cicer arietinum</i> Garbanzo; Chickpea	1	5720.0
<i>Cichorium intybus</i> Succory; Chicory; Witloof	1	2448.0
<i>Cichorium endivia</i> Endive; Escarole	1	4508.0
<i>Cinnamomum verum</i> Cinnamon; Ceylon Cinnamon	1	
<i>Cinnamomum camphora</i> Camphor; Ho Leaf	1	
<i>Cinnamomum aromaticum</i> Cassia; Chinesischer Zimtbaum (Ger.); Chinazimt (Ger.); Chinese Cinnamon; Cassia Bark; Saigon Cinnamon; Canelle de Cochinchine (Fr.); China Junk Cassia; Zimtcassie (Ger.); Canela de la China (Sp.); Cannelier de Chine (Fr.); Canelero chino (Sp.); Cannelier Casse (Fr.); Cassia Lignea; Kashia-Keihi (Jap.); Chinese Cassia	1	
<i>Cistus ladaniferus</i> Gum Cistus; Ambreine; Rockrose; Labdanum	1	2180.0
<i>Citrullus lanatus</i> Watermelon	2	12898.0
<i>Citrullus colocynthis</i> Colocynth	1	
<i>Citrus sinensis</i> Orange	2	3377.0
<i>Citrus reticulata</i> Mandarin; Tangerine	2	2132.0
<i>Citrus paradisi</i> Grapefruit	3	1844.0
<i>Citrus medica</i> Citron	1	
<i>Citrus limon</i> Lemon	2	
<i>Citrus aurantium</i> Bitter Orange; Petitgrain	2	2.0
<i>Citrus aurantiifolia</i> Lime	3	1700.0
<i>Cnicus benedictus</i> Blessed Thistle	1	
<i>Cnidioscolus chayamansa</i> Chaya	1	7440.0

Plant	# Chemicals	Total PPM
<i>Cocos nucifera</i> Cocotero (Sp.); Copra; Coconut; Nariyal; Kokospalme (Ger.); Coconut Palm	1	
<i>Coffea arabica</i> Coffee	1	
<i>Colocasia esculenta</i> Taro	1	12380.0
<i>Conyza canadensis</i> Hogweed; Horseweed; Butterweed	1	
<i>Corchorus olitorius</i> Mulukiya; Nalta Jute; Jew's Mallow	1	10580.0
<i>Coriandrum sativum</i> Coriander; Cilantro; Chinese Parsley	2	
<i>Costus speciosus</i> Wild Ginger; Crepe Ginger; Cane Reed	1	
<i>Crocus sativus</i> Saffron	1	
<i>Cryptotaenia japonica</i> Japanese Honewort; Mitsuba; Japanese <i>Cryptotaenia</i> ; Stone Parsley; Ya Er Qin	1	
<i>Cucumis sativus</i> Cucumber	1	2024.0
<i>Cucurbita</i> spp Summer Squash	1	5380.0
<i>Cucurbita pepo</i> Pumpkin	1	16425.0
<i>Cucurbita foetidissima</i> Buffalo Gourd	1	
<i>Curcuma zedoaria</i> Shoti; Zedoary	1	2000.0
<i>Curcuma xanthorrhiza</i> Temu Lawak; Javan Turmeric	1	20000.0
<i>Curcuma longa</i> Turmeric; Indian Saffron	1	94888.0
<i>Cymbopogon winterianus</i> Mahapengiri; Java Citronella	1	28.0
<i>Cymbopogon parkeri</i> Skhabar	1	2580.0
<i>Cymbopogon flexuosus</i> East Indian Lemongrass	1	8500.0
<i>Cymbopogon citratus</i> West Indian Lemongrass; Lemongrass	1	28980.0
<i>Daucus carota</i> Carrot	2	1550.0
<i>Dioscorea pentaphylla</i> Mountain Yam	1	1940.0
<i>Elsholtzia polystachya</i> Bush Mint	1	
<i>Elsholtzia nipponica</i> Hsiang Ju	1	
<i>Elsholtzia eriostachya</i> 'Dwarf' Bush Mint	1	
<i>Elsholtzia blanda</i> Bantaluki; Bantulsi	1	
<i>Eucalyptus citriodora</i> Lemon Eucalyptus; Lemon-Scented Gum; Spotted Gum; Citron-Scented Gum	1	
<i>Eugenia uniflora</i> Pitanga; Surinam Cherry	1	
<i>Fagopyrum esculentum</i> Buckwheat	1	
<i>Ficus carica</i> Fiquier Commun (Fr.); Higo (Sp.); Higuera Comun (Sp.); Feigenbaum (Ger.); Fico (Ital.); Fig; Echte Feige (Ger.); Figueira (Port.)	1	574.0
<i>Foeniculum vulgare</i> Fennel	1	6604.0
<i>Fragaria</i> spp Strawberry	2	238.0
<i>Ginkgo biloba</i> Ginkgo; Maidenhair Tree	1	2746.0
<i>Glycine max</i> Soybean	1	10760.0
<i>Glycyrrhiza glabra</i> Commom Licorice; Licorice; Smooth Licorice; Licorice-Root	1	5432.0
<i>Hedeoma drummondii</i> Drummond's Pennyroyal	1	10300.0
<i>Helianthus tuberosus</i> Jerusalem Artichoke	1	1716.0
<i>Helianthus annuus</i> Girasol; Sunflower	2	41000.0
<i>Hordeum vulgare</i> Barley; Barleygrass	1	8000.0
<i>Humulus lupulus</i> Hops	1	
<i>Hypericum perforatum</i> Common St. Johnswort; Goatweed; St. John's-wort; Klamath Weed; Hypericum	1	
<i>Ipomoea batatas</i> Sweet Potato	1	3020.0

Plant	# Chemicals	Total PPM
<i>Ipomoea aquatica</i> Water Spinach; Swamp Cabbage	1	11690.0
<i>Juglans regia</i> English Walnut	1	
<i>Juglans nigra</i> Black Walnut	1	
<i>Juglans cinerea</i> Butternut	1	12642.0
<i>Lablab purpureus</i> Hyacinth Bean; Bonavist Bean; Lablab Bean	1	4210.0
<i>Lactuca sativa</i> Lettuce	1	5334.0
<i>Lagenaria siceraria</i> Calabash Gourd; White-Flowered Gourd	1	1800.0
<i>Lantana camara</i> Wild Sage; Lantana	1	
<i>Laurus nobilis</i> Bay; Bay Laurel; Grecian Laurel; Laurel; Bayleaf; Sweet Bay	1	
<i>Lavandula angustifolia</i> English Lavender	1	
<i>Lens culinaris</i> Lentil	1	7000.0
<i>Lentinus edodes</i> Shiitake	1	
<i>Lepidium meyenii</i> Peruvian Ginseng; Maca	1	
<i>Linum usitatissimum</i> Flax; Linseed	1	
<i>Lippia alba</i> White Lippia	1	
<i>Lupinus albus</i> White Lupine	1	5700.0
<i>Lycopersicon esculentum</i> Tomato	2	2644.0
<i>Macadamia</i> spp Macadamia	1	1900.0
<i>Magnolia fargesii</i> Hsin-I; Xin-Yi	1	
<i>Malus domestica</i> Apple	1	248.0
<i>Mangifera indica</i> Mango	1	1100.0
<i>Manihot esculenta</i> Cassava; Yuca; Tapioca	1	1650.0
<i>Medicago sativa</i> Alfalfa; Lucerne	1	
<i>Melaleuca viridiflora</i> Broad-Leaf Tea-Tree; Niaouli	1	
<i>Melia azedarach</i> Chinaberry	1	
<i>Melicoccus bijugatas</i> Genip; Mamoncillo; Pitomba; Honey berry	1	
<i>Melissa officinalis</i> Melissa; Bee Balm; Balm; Lemonbalm	2	2355.0
<i>Mentha x rotundifolia</i> Applemint	1	300.0
<i>Mentha x piperita</i> Peppermint	2	0.1
<i>Mentha spicata</i> Hortela da Folha Miuda; Spearmint	1	
<i>Micromeria varia</i> Madeiran 'Hyssop'	1	
<i>Monarda russeliana</i> Russel's Monarda	1	940.0
<i>Monarda fistulosa</i> Wild Bergamot	1	1674.0
<i>Monarda citriodora</i> Lemon Mint	1	
<i>Moringa oleifera</i> Benzolive Tree; Drumstick Tree; Horseradish Tree; Ben Nut; Moringa; Jacinto (Sp.); West Indian Ben	1	
<i>Mucuna pruriens</i> Velvetbean; Cowage	1	7950.0
<i>Murraya</i> sp None	1	980.0
<i>Musa x paradisiaca</i> Banana; Plantain	1	917.0
<i>Myrtus communis</i> Arrayan (Sp.); Myrtle; Myrte (Ger.); Mirto (Sp.)	1	
<i>Nasturtium officinale</i> Berro; Watercress	1	8000.0
<i>Nelumbo nucifera</i> Water Lotus	1	6464.0
<i>Nepeta cataria</i> Catnip	1	

Plant	# Chemicals	Total PPM
<i>Nigella sativa</i> Roman Coriander; Black Cumin; Nutmeg-Flower; Black Caraway; Fennel-Flower	1	33500.0
<i>Ocimum tenuiflorum</i> Anise-Scented Basil	2	
<i>Ocimum gratissimum</i> Agbo; Shrubby Basil	1	
<i>Ocimum canum</i> Hoary Basil	1	
<i>Ocimum basilicum</i> Basil; Cuban Basil; Sweet Basil	3	21795.0
<i>Oenothera biennis</i> Evening-Primrose	1	11526.0
<i>Opuntia ficus-indica</i> Nopalito; Nopal; Indian Fig; Prickly Pear	1	13440.0
<i>Origanum majorana</i> Marjoram; Sweet Marjoram	1	
<i>Oryza sativa</i> Rice	1	
<i>Pachyrhizus erosus</i> Yambean	1	2400.0
<i>Panax quinquefolius</i> American Ginseng; Ginseng	1	680.0
<i>Panax ginseng</i> Ginseng; Korean Ginseng; Chinese Ginseng; Oriental Ginseng	2	
<i>Papaver somniferum</i> Poppyseed Poppy; Opium Poppy	1	10084.0
<i>Papaver bracteatum</i> Great Scarlet Poppy	1	10100.0
<i>Pelargonium roseum</i> Scented Geranium	1	
<i>Pelargonium citrosum</i> Citrosa	1	
<i>Perideridia gairdneri</i> Squaw Root	1	1778.0
<i>Perilla frutescens</i> Perilla	1	
<i>Persea americana</i> Avocado	1	2876.0
<i>Petroselinum crispum</i> Parsley	1	2564.0
<i>Phaseolus vulgaris</i> Dwarf Bean; Snap Bean; Garden Bean; Kidney Bean; Wax Bean; Black Bean; Green Bean; Flageolet Bean; Popping Bean; Haricot; Pop Bean; Navy Bean; French Bean; String Bean; Field Bean; Haricot Bean; Haricot Vert	1	21290.0
<i>Phaseolus lunatus</i> Butter Bean; Lima Bean	1	6034.0
<i>Phaseolus acutifolius</i> Tepary Bean	1	
<i>Phoenix dactylifera</i> Date Palm	1	4380.0
<i>Phyllanthus emblica</i> Emblic; Myrobalan	1	710.0
<i>Pimenta racemosa</i> Bayrum Tree; West Indian Bay	2	36180.0
<i>Pinus sylvestris</i> Scotch Pine	1	
<i>Pinus pinea</i> Pignolia; Italian Stone Pine	1	
<i>Pinus edulis</i> Pinyon Pine	1	
<i>Piper nigrum</i> Black Pepper; Pepper; White Pepper	1	
<i>Pistacia vera</i> Pistachio	1	7926.0
<i>Pisum sativum</i> Pea	1	9934.0
<i>Portulaca oleracea</i> Verdolaga; Purslane	1	5628.0
<i>Pouteria campechiana</i> Canistel	1	
<i>Pouteria caimito</i> Abiu; Caimito	1	
<i>Prunus persica</i> Peach	1	2754.0
<i>Prunus domestica</i> Plum	1	810.0
<i>Prunus armeniaca</i> Apricot	1	880.0
<i>Psidium guajava</i> Guava	2	720.0
<i>Psidium cattleianum</i> Strawberry Guava	1	410.0
<i>Psophocarpus tetragonolobus</i> Asparagus Pea; Goa Bean; Winged Bean	1	20012.0

Plant	# Chemicals	Total PPM
<i>Psoralea esculenta</i> Prairie Potato; Prairie Apple; Prairie Turnip; Breadroot; Indian Bread-Root; Indian Turnip	1	506.0
<i>Punica granatum</i> Granado (Sp.); Grenadier (Fr.); Pomegranate; Romanzeiro (Port.); Mangrano (Sp.); Zakuro (Jap.); Granatapfelbaum (Ger.); Granatapfelstrauch (Ger.)	1	
<i>Pyrus communis</i> Pear	1	618.0
<i>Raphanus sativus</i> Radish	1	2710.0
<i>Rehmannia glutinosa</i> Chinese Foxglove	1	2000.0
<i>Rosa gallica</i> French Rose	1	
<i>Rosmarinus officinalis</i> Rosemary	1	
<i>Salvia sclarea</i> Clary Sage	2	3000.0
<i>Salvia officinalis</i> Sage	1	
<i>Sambucus canadensis</i> American Elderberry; American Elder; Sweet Elder; Elderberry	1	1386.0
<i>Sassafras albidum</i> Sassafras	1	
<i>Satureja obovata</i> Savory; Iberian Savory	1	
<i>Scutellaria baicalensis</i> Huang Qin; Chinese Skullcap; Baikal Skullcap	1	
<i>Secale cereale</i> Rye	1	
<i>Sechium edule</i> Chayote	1	290.0
<i>Senna obtusifolia</i> Sicklepod	1	4540.0
<i>Sesamum indicum</i> Benneseed; Ajonjoli (Sp.); Sesamo (Sp.); Beni; Sesame	1	18826.0
<i>Silybum marianum</i> Lady's Thistle; Milk Thistle	1	67000.0
<i>Sinapis alba</i> White Mustard	1	10272.0
<i>Skimmia arborescens</i> Skimmia	1	
<i>Solanum tuberosum</i> Potato	1	3136.0
<i>Solanum melongena</i> Eggplant; Aubergine	1	2974.0
<i>Spinacia oleracea</i> Spinach	1	12588.0
<i>Stachys officinalis</i> Bishop's-Wort; Purple Betony; Betony; Wood Betony	1	
<i>Stachytarpheta cayennensis</i> Verbena	1	
<i>Syzygium aromaticum</i> Clove; Clovetree	1	
<i>Tagetes minuta</i> Stinking-Roger; Wild Marigold; Dwarf Marigold; Mexican Marigold; Muster John Henry; Aztec Marigold	1	
<i>Tamarindus indica</i> Kilytree; Indian Tamarind; Tamarind	1	408.0
<i>Thymus x citriodorus</i> Lemon Thyme; Funk's thyme	1	
<i>Thymus vulgaris</i> Garden Thyme; Common Thyme; Thyme	2	3960.0
<i>Thymus serpyllum</i> Creeping Thyme	1	
<i>Thymus longicaulis</i> Kekik; Tas Kekik	1	
<i>Thymus funkii</i> Funk's Thyme	1	
<i>Thymus capitatus</i> Spanish Origanum; Spanish Thyme; 'Sicilian' Thyme	1	
<i>Trifolium pratense</i> Peavine Clover; Purple Clover; Red Clover; Cowgrass	1	
<i>Trigonella foenum-graecum</i> Greek Clover; Greek Hay; Fenugreek; Alholva (Sp.); Bockshornklee (Ger.)	1	7440.0
<i>Triticum aestivum</i> Wheat	1	8000.0
<i>Urtica dioica</i> Stinging Nettle; European Nettle	2	
<i>Vaccinium corymbosum</i> Blueberry	1	1430.0
<i>Valerianella locusta</i> Lamb's Lettuce; Corn Salad	1	6940.0
<i>Verbena officinalis</i> Vervain	1	

Plant	# Chemicals	Total PPM
<i>Vicia faba</i> Habas; Faba Bean; Broadbean	1	4530.0
<i>Vigna unguiculata</i> Asparagus Bean; Pea Bean; Yardlong Bean	1	14142.0
<i>Vigna radiata</i> Mungbean; Green Gram	1	13432.0
<i>Vigna angularis</i> Adzuki Bean	1	4852.0
<i>Vigna aconitifolia</i> Mat Bean; Moth Bean	1	4872.0
<i>Vitis vinifera</i> Parra (Sp.); Grapevine; Grape; Weinrebe (Ger.); Vigne Vinifere (Fr.); Wine Grape; European Grape; Vid (Sp.)	1	2264.0
<i>Zanthoxylum alatum</i> Indian Prickly Ash; Wartara Oil Tree	1	
<i>Zea mays</i> Corn	2	5574.0
<i>Zingiber officinale</i> Ginger	4	49454.0