

A Mosquitocide

*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
Acacia senegal Senegal Gum; Gum Arabic; Gum Arabic Tree; Sudan Gum Arabic; Kher	1	
Acacia nilotica Babul	1	
Acacia leucophloea Pilang Bast	1	
Achillea millefolium Yarrow; Milfoil	1	320.0
Aesculus hippocastanum Horse Chestnut	1	
Agastache nepetoides	1	
Agastache foeniculum Giant Hyssop	1	
Albizia lebbek Lebbeck Tree; Women's-Tongue Tree; Frywood; East Indian Walnut; Siris Tree; Koko; Lebbeck	1	
Aloysia citrodora Lemon Verbena	1	532.0
Amomum compactum Chester Cardamom; Round Cardamom; Siam Cardamom; Java Cardamom	1	
Angelica archangelica Angelica; Garden Angelica; Wild Parsnip	1	40.0
Arctium lappa Burdock; Great Burdock; Gobo	2	
Arctostaphylos uva-ursi Bearberry; Uva Ursi	1	
Artemisia pallens Davana	1	
Artemisia annua Annual Mugwort (GRIN); Annual Wormwood (GRIN); Sweet Wormwood (GRIN); Sweet Annie; Qinghao	1	
Asclepias syriaca Milkweed	1	
Avena sativa Oats	1	
Ballota nigra Black Horehound	1	70.0
Bidens pilosa	1	
Boswellia serrata Salaki; Salai Guggal; Kundur Luban; Indian Frankincense; Salai; Indian Olibanum-Tree	1	
Brassica oleracea var. italica Heading Broccoli; Calabrese; Purple Cauliflower; Cape Broccoli; Winter Broccoli; Broccoli; Sprouting Broccoli; Asparagus Broccoli	1	
Brassica oleracea var. botrytis l. Cauliflower	1	
Calendula officinalis Pot-Marigold; Calendula	2	
Calotropis sp. Giant Milkweed	1	
Camellia sinensis Tea	1	152.0
Camellia japonica Camelia (Fr., Port.); Common Camellia; Rose du Japon (Fr.); Japanese Tea; Camellia; Tsubaki (Jap.); Kamelie (Ger.); Camelia (Sp.)	1	
Cananga odorata Ylang-Ylang; Cananga	1	
Capsicum frutescens Hot Pepper; Spur Pepper; Chili; Cayenne; Red Chili; Tabasco	1	
Capsicum annuum Cone Pepper; Paprika; Bell Pepper; Sweet Pepper; Cherry Pepper; Green Pepper	2	
Carica papaya Papaya	1	
Carthamus tinctorius Safflower	1	156.0
Centaurea calcitrapa Star-Thistle	1	
Centaurium erythraea Centaury	1	
Chimaphila umbellata Pipsissewa; King's Cure	1	4225.0
Chrysanthemum x morifolium Mum; Ju Hua (Pinyin); Chrysanthemum; Florist's Chrysanthemum	1	
Chrysanthemum cinerariifolium Pyrethrum	1	
Cichorium intybus Chicory; Witloof; Succory	1	
Cinnamomum verum Cinnamon; Ceylon Cinnamon	1	2632.0

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<i>Cinnamomum camphora</i> Camphor; Ho Leaf	1	
<i>Citrus sinensis</i> Orange	1	
<i>Citrus reticulata</i> Tangerine; Mandarin	1	18.0
<i>Citrus paradisi</i> Grapefruit	1	
<i>Citrus aurantium</i> Petitgrain; Bitter Orange	1	
<i>Citrus aurantiifolia</i> Lime	1	500.0
<i>Coccinia grandis</i> Ivy Gourd; Tindora; Pepasan; Little Gourd; Kundree; Tindori; Kanduri	1	
<i>Cocos nucifera</i> Coconut; Coconut Palm; Nariyal; Cocotero (Sp.); Copra; Kokospalme (Ger.)	1	
<i>Collinsonia canadensis</i> Stone Root	1	
<i>Copaifera</i> spp Copaiba	1	961200.0
<i>Coriandrum sativum</i> Chinese Parsley; Cilantro; Coriander	1	16.0
<i>Cucumis sativus</i> Cucumber	1	
<i>Cucumis melo</i> Nutmeg Melon; Netted Melon; Persian Melon; Muskmelon; Cantaloupe; Melon	1	
<i>Cuminum cyminum</i> Cumin	1	640.0
<i>Cunila origanoides</i> Mountain Dittany; Frost Mint; Frost Flower; American Dittany; Stone Mint; Maryland Dittany; Dittany	1	280.0
<i>Curcuma longa</i> Turmeric; Indian Saffron	1	
<i>Cymbopogon winterianus</i> Mahapengiri; Java Citronella	1	294.0
<i>Cymbopogon nardus</i> Citronella; Ceylon Citronella	1	768.0
<i>Cymbopogon citratus</i> West Indian Lemongrass; Lemongrass	1	
<i>Daucus carota</i> Carrot	2	2400.0
<i>Dracocephalum thymiflora</i> Thyme-Flowered Moldavica	1	500.0
<i>Dracocephalum parviflora</i> Small-Flowered Moldavica	1	100.0
<i>Drimys winteri</i> Winter's Bark	1	
<i>Duchesnea indica</i> Mock Strawberry; False Strawberry; Indian Strawberry	1	
<i>Echinacea</i> spp Coneflower; Echinacea	1	84.0
<i>Echinacea purpurea</i> Purple-Coneflower; Echinacea; Eastern Purple-Coneflower	1	
<i>Echinacea pallida</i> Echinacea; Pale Purple-Coneflower; Pale-Flower Echinacea	1	
<i>Echinacea angustifolia</i> Narrow Leaf Purple-Coneflower; Echinacea; Narrow Leaf Echinacea	1	
<i>Elsholtzia polystachya</i> Bush Mint	1	
<i>Elsholtzia pilosa</i> Hairy Mint Shrub	1	
<i>Elsholtzia cristata</i> Furan Chemotype	1	
<i>Erythroxylum coca</i> Coca	1	
<i>Eucalyptus globulus</i> Blue Gum; Tasmanian Bluegum; Eucalypt	1	
<i>Eucalyptus citriodora</i> Lemon Eucalyptus; Spotted Gum; Lemon-Scented Gum; Citron-Scented Gum	1	1560.0
<i>Eupatorium odoratum</i> Jack na bush	1	
<i>Euphorbia pulcherrima</i> Poinsettia	1	
<i>Euphorbia hirta</i> Queensland Asthma Herb	1	
<i>Fagopyrum esculentum</i> Buckwheat	1	
<i>Ficus carica</i> Fig; Figueira (Port.); Higo (Sp.); Feigenbaum (Ger.); Echte Feige (Ger.); Higuera Comun (Sp.); Fico (Ital.); Fiquier Commun (Fr.)	2	
<i>Galeopsis tetrahit</i> Hemp Nettle	1	80.0
<i>Gaultheria procumbens</i> Mountain Tea; Wintergrun (Ger.); Teaberry; Creeping Wintergreen; Wintergreen; Checkerberry	1	
<i>Gentiana lutea</i> Yellow Gentian; Gentian	1	

Plant	# Chemicals	Total PPM
<i>Glechoma hederacea</i> Alehoof	1	
<i>Glycine max</i> Soybean	1	
<i>Glycyrrhiza glabra</i> Smooth Licorice; Commom Licorice; Licorice; Licorice-Root	1	
<i>Gossypium sp</i> Cotton	1	
<i>Hedeoma pulegioides</i> American Pennyroyal	1	300.0
<i>Hedeoma hispida</i> Hispid Pennyroyal	1	948.0
<i>Helianthus annuus</i> Sunflower; Girasol	1	
<i>Hemidesmus indicus</i> Indian Sarsaparilla	1	
<i>Hibiscus sabdariffa</i> Rosella (Ger.); Sorrel; Sereni (Sp.); Roselle; Kharkadi; Acedera de Guinea (Sp.); Indian Sorrel; Jamaica Sorrel; <i>Rosa de Jamaica</i> (Sp.); Red Sorrel; Malventee (Ger.)	1	
<i>Humulus lupulus</i> Hops	1	
<i>Hypericum perforatum</i> St. John's-wort; Common St. Johnswort; Goatweed; Hypericum; Klamath Weed	2	
<i>Ilex paraguariensis</i> Paraguay Tea; Mate; South American Holly	1	
<i>Illicium verum</i> Chinese Star Anise; Sternanis (Ger.); anis estrelado (Sp.); anis de China (Sp.); Star Anise; Chinesischer Sternanis (Ger.)	1	7200.0
<i>Iris x germanica</i> Orris	1	
<i>Isanthus brachiatus</i> False Pennyroyal	1	60.0
<i>Jatropha curcas</i> Purging Nut; Physic Nut	1	
<i>Juniperus communis</i> Juniper; Common Juniper	2	240.0
<i>Kalanchoe pinnata</i> Siempre Viva; Air Plant	1	
<i>Lactuca virosa</i> Bitter Lettuce	1	
<i>Lactuca scariola</i> Prickly Lettuce	1	
<i>Lantana camara</i> Wild Sage; Lantana	1	3200.0
<i>Laurus nobilis</i> Bayleaf; Grecian Laurel; Bay Laurel; Sweet Bay; Bay; Laurel	1	
<i>Lavandula x intermedia</i> Dutch Lavender; Lavandin	1	880.0
<i>Lavandula latifolia</i> Broad-Leaved Lavender; Spike Lavender; Aspic	1	382.0
<i>Lavandula angustifolia</i> English Lavender	1	
<i>Leonurus cardiaca</i> Motherwort	1	400.0
<i>Lepechinia schiediana</i> Schiede's Lepechinia	1	400.0
<i>Lepechinia calycina</i> Epling's Lepechinia	1	570.0
<i>Ligustrum japonicum</i> Ligustri Fructus; Japanese Privet	1	
<i>Lycopersicon esculentum</i> Tomato	1	
<i>Lycopus virginicus</i> Bugle	1	160.0
<i>Lycopus europeus</i> European Bugle	1	250.0
<i>Medicago sativa</i> Alfalfa; Lucerne	1	
<i>Melaleuca alternifolia</i> Teatree	1	
<i>Mentha spicata</i> Hortela da Folha Miuda; Spearmint	1	3900.0
<i>Mentha pulegium</i> European Pennyroyal	1	120.0
<i>Mentha longifolia</i> Biblical Mint	1	19990.0
<i>Mentha arvensis</i> var. <i>piperascens</i> Japanese Mint; Field Mint; Cornmint	1	
<i>Mentha aquatica</i> Water Mint	1	
<i>Micromeria croatica</i>	1	
<i>Mirabilis jalapa</i> Four-o'clock	1	

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<i>Mitchella repens</i> Squawvine; Partridge-berry	1	
<i>Moldavica thymiflora</i> Thyme-Flowered Moldavica	1	
<i>Moldavica parviflora</i> Small-Flowered Moldavica	1	
<i>Momordica charantia</i> Bitter Melon; Sorosi	1	
<i>Morus alba</i> White Mulberry; Sang-Pai-Pi	1	
<i>Murraya koenigii</i> Curry Leaf Tree; Curry Leaf; Indian Curry Tree	1	
<i>Myrica cerifera</i> Bayberry; Southern Bayberry; Wax Myrtle; Candle-Berry	1	
<i>Myroxylon balsamum</i> Peru Balsam; Tolu Balsam	1	
<i>Myrtus communis</i> Arrayan (Sp.); Myrte (Ger.); Mirto (Sp.); Myrtle	1	8.0
<i>Nepeta cataria</i> Catnip	1	3550.0
<i>Nigella sativa</i> Nutmeg-Flower; Fennel-Flower; Black Cumin; Roman Coriander; Black Caraway	1	
<i>Ocimum gratissimum</i> Agbo; Shrubby Basil	1	
<i>Ocimum canum</i> Hoary Basil	1	
<i>Ocimum basilicum</i> Basil; Cuban Basil; Sweet Basil	1	6392.0
<i>Oenothera biennis</i> Evening-Primrose	1	200.0
<i>Olea europaea</i> Olive	1	
<i>Origanum vulgare</i> Common Turkish Oregano; Wild Marjoram; Wild Oregano; European Oregano; Pot Marjoram; Oregano	1	1840.0
<i>Origanum onites</i> Pot Marjoram; Oregano	1	164.0
<i>Origanum majorana</i> Marjoram; Sweet Marjoram	1	2614.0
<i>Panax quinquefolius</i> American Ginseng; Ginseng	2	
<i>Panax ginseng</i> Korean Ginseng; Ginseng; Chinese Ginseng; Oriental Ginseng	2	
<i>Peperomia pelucida</i> Pepper elder; Yerba de la plata	1	
<i>Phoenix dactylifera</i> Date Palm	1	
<i>Phragmites australis</i> Common Reed; Giant Reed; Ditch Reed; Reed Grass	1	
<i>Phytolacca americana</i> Pokeweed	1	
<i>Pilocarpus microphyllus</i> Maranhao Jaborandi	1	950.0
<i>Pimenta racemosa</i> Bayrum Tree; West Indian Bay	1	610.0
<i>Pimenta dioica</i> Clover-Pepper; Jamaica-Pepper; Allspice; Pimento; Pimenta	1	1520.0
<i>Pimpinella anisum</i> Anise; Sweet Cumin	1	
<i>Pinus sylvestris</i> Scotch Pine	1	
<i>Piper nigrum</i> Black Pepper; White Pepper; Pepper	1	
<i>Piper cubeba</i> Cubeb; Cubeb Pepper	1	14800.0
<i>Piper betel</i> Betel Pepper	1	10000.0
<i>Piper auritum</i> Hoja Santa; Cordoncillo; Hierba Santa	1	
<i>Pisum sativum</i> Pea	1	
<i>Plantago ovata</i> Blond Psyllium; Spogel Seeds; Indian Plantago; Psyllium; Ispaghula	1	
<i>Plumeria acutifolia</i> Frangipani	1	
<i>Pogostemon cablin</i> Patchouli	1	
<i>Polygala tenuifolia</i> Chinese Senega	1	
<i>Populus balsamifera</i> Balsam Poplar	1	
<i>Prunella vulgaris</i> Self-Heal; Heal-All	1	
<i>Psidium guajava</i> Guava	1	

Plant	# Chemicals	Total PPM
<i>Pterocarpus santalinus</i> Red Saunders	1	
<i>Pycnanthemum virginianum</i> Virginia Mountain Mint	1	2030.0
<i>Pycnanthemum verticillatum</i> Whorled Mountain Mint	1	630.0
<i>Pycnanthemum torreyi</i> Torrey's Mountain Mint	1	280.0
<i>Pycnanthemum tenuifolium</i> Slenderleaf Mountain Mint	1	4920.0
<i>Pycnanthemum setosum</i> Setose Mountain Mint	1	3286.0
<i>Pycnanthemum pycnanthemoides</i> Typical Mountain Mint	1	2204.0
<i>Pycnanthemum pilosum</i> Pilose Mountain Mint	1	1400.0
<i>Pycnanthemum muticum</i> Muticous Mountain Mint	1	600.0
<i>Pycnanthemum montanum</i> Montane Mountain Mint	1	112.0
<i>Pycnanthemum loomisii</i> Loomis' Mountain Mint	1	1344.0
<i>Pycnanthemum incanum</i> Hoary Mountain Mint	1	
<i>Pycnanthemum clinopodioides</i> Clinopod Mountain Mint	1	1408.0
<i>Pycnanthemum californicum</i> California Mountain Mint	1	288.0
<i>Pycnanthemum beadlei</i> Beadle's Mountain Mint	1	98.0
<i>Rhododendron ferrugineum</i> Rusty-Leaved Alpenrose	1	
<i>Ribes nigrum</i> Black Currant	1	68.0
<i>Ricinus communis</i> Castorbean	1	
<i>Rosmarinus officinalis</i> Rosemary	2	680.0
<i>Rubus fruticosus</i> Blackberry	1	
<i>Salvia officinalis</i> Sage	2	4860.0
<i>Sambucus nigra</i> Black Elder; European Alder; European Elderberry; Elder; European Elder	1	
<i>Sarcostemma acidum</i> Soma	1	
<i>Sarracenia purpurea</i>	1	
<i>Sassafras albidum</i> Sassafras	1	
<i>Satureja vulgaris</i> Common Savory	1	212.0
<i>Satureja obovata</i> Iberian Savory; Savory	1	
<i>Satureja douglasii</i> Douglas' Savory	1	78.0
<i>Schinus molle</i> Peruvian Peppertree; California Peppertree; Mastic-Tree	1	
<i>Scutellaria parvula</i> Small Skullcap	1	94.0
<i>Scutellaria lateriflora</i> Scullcap; Mad-Dog Skullcap	1	
<i>Scutellaria galericulata</i> Marsh Skullcap	1	352.0
<i>Scutellaria churchilliana</i> Hybrid Skullcap	1	136.0
<i>Sesamum indicum</i> Benneseed; Sesamo (Sp.); Ajonjoli (Sp.); Beni; Sesame	1	
<i>Spartium junceum</i> Weaver's Broom; Genet; Spanish Broom	1	
<i>Stevia rebaudiana</i> Sweet Leaf of Paraguay; Ca-A-E; Stevia	1	
<i>Swertia chirata</i> Chirata; Chiretta	1	
<i>Syzygium aromaticum</i> Clovetree; Clove	1	16320.0
<i>Tanacetum vulgare</i> Tansy	1	
<i>Taraxacum officinale</i> Dandelion	1	
<i>Terminalia arjuna</i> Arjun; Arjuna	1	
<i>Teucrium scordium</i> Water Germander	1	

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<i>Teucrium polium</i> Golden Germander	1	
<i>Teucrium chamaedrys</i> Wall Germander	1	
<i>Thevetia peruviana</i> Chirca (Sp.); Loandro-Amarelo (Port.); Peruvian Yellow Oleander; Luckynut; Yellow Oleander; Oleandre Jaune (Fr.); Thevetie (Ger.); Adelfa Amarilla (Sp.); Cabalonga (Sp.)	1	
<i>Thymus serpyllum</i> Creeping Thyme	1	4584.0
<i>Thymus orospedanus</i> Orosped Thyme	1	1436.0
<i>Thymus mastichina</i> Spanish Marjoram	1	260.0
<i>Thymus capitatus</i> 'Sicilian' Thyme; Spanish Thyme; Spanish Origanum	1	620.0
<i>Tilia</i> sp. Lime; Basswood; Linden	1	
<i>Trifolium pratense</i> Purple Clover; Peavine Clover; Cowgrass; Red Clover	1	
<i>Trilisa odoratissima</i> Carolina Vanilla; Deer's Tongue; Hound's Tongue; Vanilla Plant	1	
<i>Triticum aestivum</i> Wheat	1	
<i>Tussilago farfara</i> Coltsfoot	1	
<i>Ulex europaeus</i> Gorse	1	
<i>Vaccinium myrtillus</i> Dwarf Bilberry; Bilberry; Whortleberry	2	
<i>Vaccinium corymbosum</i> Blueberry	1	
<i>Valeriana officinalis</i> Common Valerian; Valerian; Garden-Heliotrope	1	
<i>Verbascum thapsus</i> Flannelleaf; Mullein; Velvetplant; Flannelplant; Great Mullein	1	
<i>Vernonia cinerea</i> Purple fleabane	1	
<i>Viburnum prunifolium</i> Black Haw	1	
<i>Viburnum opulus</i> Snowballbush; Crampbark; European Cranberry Bush; Guelder Rose	1	
<i>Viscum album</i> European Mistletoe	1	
<i>Vitellaria paradoxa</i> Sheatree; Shea; Shea-Butter-Tree; Shea Nut; Butterseed	1	
<i>Vitis vinifera</i> Vigne Vinifere (Fr.); Wine Grape; Grape; Weinrebe (Ger.); Grapevine; Vid (Sp.); Parra (Sp.); European Grape	1	
<i>Zea mays</i> Corn	2	