

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals and their Biological Activities in: *Thymus vulgaris* L. (Lamiaceae) -- Common Thyme, Garden Thyme, Thyme

Chemicals

2,6,6-TRIMETHYL-BICYCLO(3,1,1)-HEPTA-2-ENE *Essential Oil:*

No activity reported.

3,3',4,4'-TETRAHYDROXY-5,5'-DI-ISO-PROPYL-2,2'-DIMETHYL-BIPHENYL *Leaf*
35 ppm;

No activity reported.

3,3',4,4'-TETRAONE-5,5'-DI-ISO-PROPYL-2,2'-DIMETHYL-BIPHENYL *Leaf* *3 ppm;*

No activity reported.

3,4,4'-TRIHYDROXY-5,5'-DI-ISO-PROPYL-2,2'-DIMETHYL-BIPHENYL *Leaf* *1 ppm;*

No activity reported.

4'-HYDROXY-5,5'-DI-ISO-PROPYL-2,2'-DIMETHYL-BIPHENYL-3,4-DIONE *Leaf* *9 ppm;*

No activity reported.

4'5-DIHYDROXY-3',6,7-TRIMETHOXYFLAVONE *Leaf:*

Antirhinoviral; Antiviral; Pesticide

4'5-DIHYDROXY-6,7,8-TRIMETHOXYFLAVONE *Leaf* *5.5 ppm;*

No activity reported.

4'5-DIHYDROXY-7-METHOXYFLAVONE *Leaf* *43 ppm;*

No activity reported.

4,4'-DIHYDROXY-5,5'-DI-ISO-PROPYL-2,2'-DIMETHYL-BIPHENYL-3,6-DIONE
Leaf:

No activity reported.

4-HYDROXYBENZOYL-GLUCOSE *Leaf:*

No activity reported.

4-TERPINEOL *Plant* *73 - 8,320 ppm*

Antiasthmatic; Antioxidant; Antiradicular; Diuretic; FLavor *FEMA 20-100*; Insectifuge;
Perfumery; Pesticide

5,4'-DIHYDROXY-6,7,8,3'-TETRAMETHOXYFLAVONE *Plant*:

Fungistat; Pesticide

5-HYDROXY-4',7-DIMETHOXYFLAVONE *Leaf 1 ppm*;

No activity reported.

6-HYDROXY-LUTEIN *Plant*:

No activity reported.

8-DEMETHYL-THYMONIN *Plant*:

No activity reported.

8-METHOXY-CIRSILINEOL *Leaf 7.4 ppm*;

Aldose-Reductase-Inhibitor *10 uM*; Antispasmodic

ALPHA-HYDROXY-LINOLENIC-ACID *Seed*:

No activity reported.

ALPHA-LINOLENIC-ACID *Plant 6,900 - 7,452 ppm*

5-Alpha-Reductase-Inhibitor; Antiaggregant; Antihypertensive; Antiinflammatory *IC50=42 uM*; Antileukotriene-D4; Antimenorrhagic; Antimetastatic; Antiprosthetic; Cancer-Preventive; Hypotensive; Immunostimulant *0.12 ml/man/day*; Lymphocytogenic *0.5 ug/ml*; Propepic; Prostaglandin-Synthesis-Inhibitor *39.5 g/day/hmn*; Vasodilator

ALPHA-PHELLANDRENE *Plant 50 - 425 ppm*

Antibacterial; Antistaphylococcic; Dermal; Emetic; FLavor *FEMA 10-130*; Fungicide; Insectiphile; Irritant; Laxative; Perfumery; Pesticide

ALPHA-PINENE *Plant 15 - 1,598 ppm*

Allelochemic; Allergenic; Antiacne; Antibacterial; Antifeedant; Antiflu; Antiinflammatory *500 mg/kg*; Antipneumonic; Antiseptic; Antispasmodic; Antistaphylococcic; Antiviral; Cancer-Preventive; Coleoptophile; Expectorant; FLavor *FEMA 15-150*; Herbicide *IC50=30 uM*; Insecticide *0.82 uM/fly*; Insectifuge *50 ppm*; Insectiphile; Irritant; P450-2B1-Inhibitor *IC50=0.087 uM*; Perfumery; Pesticide; Sedative; Spasmogenic; Tranquilizer; Transdermal

ALPHA-TERPINENE *Plant*:

Acaricide; ACE-Inhibitor *100 ug/ml (weak activity)*; Aldose-Reductase-Inhibitor *100 ug/ml*; Antiacetylcholinesterase *IC50=1.0 mM*; Antinitrosaminic; Antispasmodic; FLavor *FEMA 1-40*; Insecticide *0.86 uM/fly*; Insectifuge; P450-2B1-Inhibitor *IC50=0.76 uM*; Perfumery; Pesticide; Spasmogenic

ALPHA-TERPINEOL *Plant 36 - 6,500 ppm*

ACE-Inhibitor *100 ug/ml (weak activity)*; Aldose-Reductase-Inhibitor *100 ug/ml*; Allelopathic; Antiacne; Antibacterial *MIC=800-1,600 ug/ml*; Anticancer; Anticariogenic; Antiinflammatory; Antiproliferant; Antiseptic; Cicatrizant *ED50=240 ug/g mus*; FLavor *FEMA 5-40*; Insecticide *1.29 uM/fly*; Interleukin-6-Inhibitor; Mosquitofuge > *Deet*; Motor-Depressant; Nematicide *MLC=1 mg/ml*; Perfumery; Pesticide; Sedative; Termiticide *IC100=5 mg/g*; Transdermal; Vulnerary *ED50=240 ug/g mus*

AMYL-ALCOHOL *Essential Oil 13,900 ppm*;

FLavor *FEMA 35-3,500 ppm*

ANETHOLE *Essential Oil:*

Allergenic; Antibacterial *MBC=200 ug/ml*; Antigenotoxic *40-400 mg/kg orl mus*; Antihepatotic; Antiinflammatory; AntiNF-kB; Antioxidant; Antiradicular; Antisalmonella *MIC=200 ug/ml*; Antiseptic *200 ug/ml*; Antispasmodic; AntiTNF; Antitumor; Antiyeast; Cancer-Preventive; Candidicide; Carminative; Dermatitigenic; Digestive; Estrogenic; Expectorant; Fungicide; Gastrostimulant; Hepatotoxic *695 mg/kg orl mus/days*; Immunostimulant; Insecticide; Irritant; Lactagogue; Leucocytogenic; Mutagenic; Nephroprotective; Pesticide; Secretagogue; Secretolytic; Sweetener *13 x sucrose*; Sympathomimetic

APIGENIN *Plant:*

11B-HSD-Inhibitor; AntiADD; Antiaflatoxin *IC50=2.57 ppm IC50=9.52 uM*; Antiaggregant; Antiaging; Antiallergic; Antiangiogenic *4 uM*; Antiarrhythmic; Antibacterial; Anticancer (Lung); Anticomplementary; Antidermatitic; Antiestrogenic; Antiherpetic *20-54 ug/ml*; Antihistaminic *IC50=10-35 uM*; AntiHIV *IC50=143 ug/ml IC72=200 ug/ml*; Antiinflammatory = *indomethacin IC~65=1,000 uM*; Antileukemic *20-50 uM*; Antimelanomic *1-50 uM*; Antimetastatic; Antimutagenic *ID50=0.55 ug/ml ID50=10-40 nM*; Antioxidant *1.5 x Vit. E IC28.5=62.5 ug/ml*; Antiperistaltic; Antiproliferant *1-50 uM IC50=155 uM*; Antispasmodic *EC50=1-5 uM*; Antistress *10 mg/kg*; Antithyroid; Antitumor *1-50 uM*; Antitumor (Breast); Antitumor (Lung); Antitumor (Skin); Antiviral *20-54 ug/ml*; Anxiolytic *10 mg/kg*; Apoptotic *12-60 uM*; Aromatase-Inhibitor *IC65=1 uM/l*; Beta-Glucuronidase-Inhibitor *IC50=~40 uM*; Calcium-Antagonist?; Cancer-Preventive; Choleric; CNS-Depressant; COX-1-Inhibitor *IC65=1,000 uM*; COX-2-Inhibitor *<40 uM IC50=<15 uM IC>65=1,000 uM*; Cyclooxygenase-Inhibitor; Cytochrome-P450-1A1-Inhibitor; Cytotoxic *1-50 uM IC50=9.5 uM IC88=10 ug/ml*; Deiodinase-Inhibitor; Differentiator *IC40=40 uM MIC=30 uM*; Diuretic; DNA-Protective; Estrogenic *16% genistein EC50=0.1-25 uM/l EC50=1 uM*; HIF-1alpha-Inhibitor; Hyaluronidase-Inhibitor *IC50+=50-250 uM*; Hypotensive; ICAM-1-Inhibitor; IKK-Inhibitor; iNOS-Inhibitor *IC50=<15 uM*; Inotropic; Interleukin-6-Inhibitor; MAO-Inhibitor; MAPK-Inhibitor; Musculotropic; Mutagenic; Myorelaxant; NADH-Oxidase-Inhibitor; NF-kB-Inhibitor; NO-Synthase-Inhibitor *5-50 uM*; Nodulation-Signal; Ornithine-Decarboxylase-Inhibitor; P21-Inducer *10-70 uM*; Pesticide; PKC-Inhibitor *IC50=10 uM*; Polyamine-Synthesis-Inhibitor; Progestational; Protein-Kinase-C-Inhibitor *IC50=10-40 uM*; PTK-Inhibitor *10-100 uM*; Quinone-Reductase-Inducer *20 uM*; Radioprotective; Sedative *30-100 mg/kg*; Sunscreen; TNF-alpha-Inhibitor *IC50=3.27 uM*; Topoisomerase-I-Inhibitor; Topoisomerase-II-Inhibitor *50 ug/ml IC28=18 uM IC45=180 uM*; Uterotrophic *EC50=0.1-25 uM/l*; Vasodilator; VEGF-Inhibitor *IC50=2-7 uM*; Xanthine-Oxidase-Inhibitor *0.36 uM*

BETA-CADINENE *Essential Oil:*

No activity reported.

BETA-CARYOPHYLLENE *Plant 15 - 605 ppm*

No activity reported.

BETA-PHELLANDRENE *Plant:*

Expectorant; Fungicide; Perfumery

BETA-PINENE *Plant 15 - 420 ppm*

Allergenic; Antiinflammatory; Antiseptic; Antispasmodic; Candidicide; FLavor *FEMA* 15-600; Herbicide; Insectifuge; Irritant; Perfumery; Pesticide; Spasmogenic; Transdermal

BETA-TERPINEOL *Plant* 79 - 673 ppm

Insectifuge; Perfumery; Pesticide

BORNEOL *Leaf* 15 - 1,462 ppm

(-)-Chronotropic 29 ug/ml; (-)-Inotropic; Allelochemic; Analgesic; Antiacetylcholine; Antibacterial MIC=125-250 ug/ml; Antibronchitic; Antiescherichic MIC=125 ug/ml; Antifeedant; Antiinflammatory; Antiotitic; Antipyretic; Antisalmonella; Antispasmodic ED50=0.008 mg/ml; Antistaphylococcic MIC=250 ug/ml; Antiyeast; Candidicide; Choleric; CNS-Stimulant; CNS-Toxic; FLavor *FEMA*<1; Fungicide; Hepatoprotective; Herbicide IC50=470 mM IC50=470 uM; Inhalant; Insect-Repellent; Insectifuge; Irritant; Myorelaxant; Nematicide MLC=1 mg/ml; Perfumery; Pesticide; Sedative; Tranquilizer

BORNYL-ACETATE *Leaf* 16 - 795 ppm

(-)-Chronotropic 933 nl/ml; (-)-Inotropic; Antibacterial; Antifeedant; Antispasmodic ED50=0.09 mg/ml; Antiviral; Expectorant; FLavor *FEMA* 70-80; Insectifuge; Myorelaxant; Pesticide; Sedative

CAFFEIC-ACID *Leaf* 16,900 ppm;

Aldose-Reductase-Inhibitor 4 ug/ml (*weak activity*); Allergenic; Analgesic; Antiadenoviral; Antiaggregant; Antiaging; Antiatherogenic; Antibacterial; Anticancer; Anticarcinogenic; Antidepressant; Antiedemic; Antielastase IC50=86 ug/ml (475 uM) IC50=93 um/l; Antiescherichic; Antiflu; Antigonadotropic; Antihemolytic 25 uM; Antihepatoadenomic 200 ppm diet orl mus; Antihepatotoxic; Antiherpetic 50 ug/ml EC50=>50 ug/ml; Antihistaminic; AntiHIV EC50=200 ug/ml; Antihypercholesterolemic; Antihyperthyroid; Antiinflammatory; AntiLegionella; Antileukemic; Antileukotriene; Antimelanogenic; Antimutagenic; Antinitrosaminic; Antiophidic; Antioxidant 1.3 x Vit. E 1/2 BHA 1/3 quercetin 30 mM 50 uM IC57=30 ppm; Antiperoxidant IC35=200 ug/ml IC50=44 uM IC85=100 ug/ml; Antiproliferant; Antiprostaglandin; Antiradicular 1/3 quercetin 10 uM 30 mM IC50=32-35 uM; Antiseptic; Antispasmodic EC50=3.4-15 uM; Antistaphylococcic; Antistomatitic; Antisunburn; Antithiamin; Antithyroid; Antitumor 200 ppm diet orl mus; Antitumor (Skin); Antitumor-Promoter IC42=10 uM; Antiulcerogenic; Antivaccinia; Antiviral IC50=62.5 ug/ml; Anxiolytic; Calcium-Antagonist IC50=1.2 uM rbt; Cancer-Preventive; Carcinogenic 2% (diet); Chemopreventive; Cholagogue; Choleric; Clastogenic; CNS-Active; Co-carcinogenic; Collagen-Sparing; COX-2-Inhibitor IC32=100 uM; Cytoprotective; Cytotoxic TC50=200 ug/ml; Diuretic; DNA-Active; DNA-Protective; Fungicide MIC=0.4 mg/ml; Hepatocarcinogenic 400 ppm diet orl mus (*in the absence of alcohol*); Hepatoprotective; Hepatotropic; Histamine-Inhibitor; Immunostimulant; Insectifuge; Leukotriene-Inhibitor; Lipoxigenase-Inhibitor IC27=5 mM IC50=62-148 uM; Lyase-Inhibitor IC50=94-164 uM; Metal-Chelator; Ornithine-Decarboxylase-Inhibitor; Pesticide; Prooxidant; Prostaglandigenic; Sedative 500 mg; Sunscreen IC50=2.5 mg/l IC91=5 mg/l IC98=25 mg/l; Tumorigenic; Vulnerary; Xanthine-Oxidase-Inhibitor IC50=39.21 uM

CAMPHENE *Plant* 15 - 375 ppm

Allelopathic; Antilithic?; Antioxidant; Expectorant; FLavor *FEMA* 15-175; Hypocholesterolemic?; Insectifuge; Pesticide; Spasmogenic

CAMPHOR Plant 5 - 45 ppm

Allelopathic; Analgesic; Anesthetic; Antiacne; Antidiarrheic 500 ug/ml; Antidysenteric; Antiemetic 100-200 mg man orl; Antifeedant IC50=5,000 ppm diet; Antifibrositic; Antineuralgic; Antipruritic; Antiseptic; Antispasmodic ED50=0.075 mg/ml; Cancer-Preventive; Carminative; CNS-Stimulant; Convulsant; Cosmetic; Counterirritant; Decongestant; Deliriant; Ecboic; Emetic; Epileptigenic; Expectorant; Fungicide ED50=2.7 mM; Herbicide IC50=3.3-180 mM; Insect-Repellent; Insectifuge; Irritant; Nematicide MLC=1 mg/ml; Occuloirritant; P450-2B1-Inhibitor IC50=7.89 uM; Pesticide; Respirainhibitor; Respirastimulant; Rubefacient; Stimulant; Transdermal; Verrucolytic; Vibriocide 500 ug/ml

CAPRIC-ACID Plant 1,200 - 1,296 ppm

Fungicide; Irritant; Pesticide

CAPRYLIC-ACID Plant 2,400 - 2,592 ppm

Antiseptic; Candidicide 300 mg/man/12 x/day; Fungicide; Irritant; Pesticide

CAR-3-ENE Plant 127 - 1,080 ppm

No activity reported.

CAR-4-ENE Plant:

No activity reported.

CARVACROL Plant 8 - 18,720 ppm

Allergenic; Anesthetic; Anthelmintic; Antialzheimeran?; Antiatherosclerotic IC50=5.53 uM; Antibacterial MIC 170-290 MIC=39-625; Anticholinesterase?; Antidiuretic; Antiinflammatory IC50=4 uM; Antimelanomic IC50=120 uM/l; Antioxidant; Antioxidant (LDL) IC50=5.53 uM; Antiplaque MIC=39-625 ug/ml; Antiprostaglandin; Antiradicular 600 x thymol; Antiseptic 1.5 x phenol; Antispasmodic; Antistaphylococcic; Antistreptococcic; Antitussive; Candidicide 100-150 ug/ml MIC<0.1 ug/ml; Carminative; Cyclooxygenase-Inhibitor =indomethacin; Enterorelaxant; Expectorant; FLavor FEMA 10-125; Fungicide; Insectifuge; Irritant; Nematicide MLC=1 mg/ml; Pesticide; Prostaglandin-Inhibitor; Tracheorelaxant; Trichomonicide LD100=150 ug/ml; Vermifuge

CARVONE Plant:

Allergenic; Antiacetylcholinesterase IC50=1.4-1.8 mM; Antiproliferative; Antiseptic 1.5 x phenol; Cancer-Preventive; Candidistat; Carminative; CNS-Stimulant; FLavor FEMA 80-3,000; Fungistat; Insecticide; Insectifuge; Motor-Depressant; Nematicide MLC=1 mg/ml; Perfumery; Pesticide; Sedative; Trichomonicide LD100=300 ug/ml; Vermicide

CHLOROGENIC-ACID Plant:

Aldose-Reductase-Inhibitor IC50=1.8 uM rat (strong activity); Allelochemic; Allergenic; Analgesic; Antiatherosclerotic; Antibacterial; Anticancer (Colon); Anticancer (Forestomach); Anticancer (Liver); Anticancer (Skin); Anticarcinogenic; Antidiabetic; AntiEBV; Antifeedant; Antigenotoxic; Antigonadotropic; Antihemolytic 10 uM; Antihepatotoxic; Antiherpetic; Antihistaminic; AntiHIV; Antihypercholesterolemic; Antihyperthyroid; Antiinflammatory; AntiLegionella; Antileukotriene; Antimelanogenic; Antimutagenic; Antinitrosaminic; Antioxidant IC50=54.2 uM IC53=200 ppm IC80=12 uM; Antiperoxidant IC50=36 uM; Antipolio; Antiradicular 10 uM 9 x quercetin; Antiseptic; Antisunburn; Antithyroid; Antitumor;

Antitumor (Colon); Antitumor (Forestomach); Antitumor (Liver); Antitumor (Skin); Antitumor-Promoter $IC_{25}=10\ \mu M$; Antiulcer; Antiviral; Autotoxic; Cancer-Preventive; Cardioprotective; Chemopreventive; Cholagogue; Choloretic; Clastogenic; CNS-Active; CNS-Stimulant $1/6\ Caffeine$; Collagen-Sparing; Diuretic; Fungicide; Hepatoprotective; Histamine-Inhibitor; Hypoglycemic; Immunostimulant; Insectifuge; Interferonogenic; Juvabional; Larvostat; Leukotriene-Inhibitor; Lipoxygenase-Inhibitor $IC_{23}=5\ mM$; Metal-Chelator; NO-Genic; Ornithine-Decarboxylase-Inhibitor; Oviposition-Stimulant; Pesticide; Sunscreen; Sweetener; Vulnerary

CHRYSOERIOLE Plant:

Aldose-Reductase-Inhibitor $IC_{31}=10\ \mu M$; Anticomplementary; Antimutagenic; Antioxidant; Antirhinoviral; Antiviral; Cancer-Preventive

CINEOLE Plant 10 - 4,590 ppm

No activity reported.

CINNAMIC-ACID Plant:

Aldose-Reductase-Inhibitor $4\ \mu g/ml$ (weak activity); Allergenic; Anesthetic; Antibacterial; Antiinflammatory; Antimutagenic; Antispasmodic; Cancer-Preventive; Choloretic; Dermatitigenic; FLavor *FEMA 4-40*; Fungicide; Herbicide; Laxative; Lipoxygenase-Inhibitor; Pesticide; Tyrosinase-Inhibitor $ID_{50}=700\ \mu M$; Vermifuge

CIRSILINEOL Leaf:

Aldose-Reductase-Inhibitor $10\ \mu M$; Antiinflammatory $IC_{37}=1,000\ \mu M$; Antimalarial $IC_{50}=36\ \mu M$; Antispasmodic; Cancer-Preventive; COX-1-Inhibitor $IC_{37}=1,000\ \mu M$; COX-2-Inhibitor $IC_{37}=1,000\ \mu M$; Parasiticide $IC_{50}=36\ \mu M$; Pesticide; Plasmodicide

CIRSIMARITRIN Leaf 20 ppm;

No activity reported.

CITRAL Plant:

Allergenic; Antiallergic; Antianaphylactic; Antibacterial; Antihistaminic; Antiseptic $5.2\ x\ phenol$; Antishock; Barbituate-Synergist; Bronchorelaxant; Cancer-Preventive; Expectorant; FLavor *FEMA 4-170*; Fungicide $MIC\ 625\ \mu g/ml$; Glaucomagenic; Herbicide $IC_{50}=115\ \mu M$; Nematicide $IC_{52}=100\ \mu g/ml$ $MLC=100-260\ \mu g/ml$; Perfumery; Pesticide; Prostatitigenic $185\ mg/kg/day/3\ ms$; Sedative $ED\ 1-32\ mg/kg$; Teratogenic; Trichomonicide $LD_{100}=150\ \mu g/ml$; Tyrosinase-Inhibitor $ID_{50}=1.5\ mM$

COSMOSIIN Leaf:

Aldose-Reductase-Inhibitor $IC_{40}=1\ \mu M$ $IC_{99}=10\ \mu M$; Antibacterial $MIC=500\ \mu g/ml$; Candidicide

CUMINYL-ALCOHOL Essential Oil:

No activity reported.

DELTA-3-CARENE Plant 510 ppm;

Allergenic?; Antibacterial; Antiinflammatory *ipr*; Dermatitigenic; FLavor *FEMA*; Insectifuge; Irritant; Pesticide

DELTA-CADINENE Essential Oil:

Aldose-Reductase-Inhibitor; Antiacne; Antibacterial $MIC_{800}\ \mu g/ml$; Anticariogenic; Antistreptococcic; Cytochrome-P450-Inducer; P450-Inducer; Pesticide; Testosterone-

Inducer

DIOSMETIN Plant:

Aldose-Reductase-Inhibitor $IC_{17}=10\ \mu M$; Antimutagenic $IC_{50}=10-40\ nM$;
Antirhinoviral; Antiviral; Cancer-Preventive

ERIODICTYOL Plant:

Antibacterial; Antifeedant $IC_{52}<1,000\ ppm\ diet$; Antiinflammatory; Antioxidant;
Antiperoxidant; Aphidifuge; Cancer-Preventive; Expectorant; Juvabional; Pesticide

EUDESMOL Essential Oil:

No activity reported.

EUGENOL Plant:

Acaricide $LD_{50}=5.47\ \mu g/sq\ cm\ cf\ DEET\ at\ 37.59\ \mu g/sq\ cm$; Allergenic; Analgesic;
Anesthetic 200-400; Antiaggregant $IC_{50}=0.3\ \mu M$; Antiarachidonate; Antibacterial 500
 $ppm\ MBC=400\ \mu g/ml$; Anticonvulsant; Antiedemic 100; Antiestrogenic; Antifeedant;
Antigenotoxic 50-500 $mg/kg\ orl\ mus$; Antitherpetic $IC_{50}=16.2-25.6\ \mu g/ml$;
Antiinflammatory (11 μM) $IC_{97}=1,000\ \mu M$; Antikeratotic $IC_{50}=16.2-25.6\ \mu g/ml$;
Antimitotic; Antimutagenic; Antinitrosating; Antioxidant 10 $\mu M\ IC_{65}=30\ ppm$;
Antiprostaglandin 11 $\mu M\ IC_{50}=9.2\ mM$; Antipyretic 3 $ml/man/day$; Antiradicular
 $EC_{50}=2\ \mu l/l$; Antisalmonella $MIC=400\ \mu g/ml$; Antiseptic 3 $ml/man/day\ 400\ \mu g/ml$;
Antispasmodic; Antistaphylococcic; Antithromboxane; AntiTNF; Antitumor; Antiulcer;
Antiviral $IC_{50}=16.2-25.6\ \mu g/ml$; Apifuge; Calcium-Antagonist $IC_{50}=200\ \mu M\ gpg$
 $IC_{50}=224\ \mu M$; Cancer-Preventive; Candidicide; Carcinogenic?; Carminative;
Choleretic; CNS-Depressant; COX-1-Inhibitor $IC_{97}=1,000\ \mu M$; COX-2-Inhibitor
 $IC_{50}=129\ \mu M\ IC_{97}=1,000\ \mu M$; Cytochrome-P450-Inhibitor; Cytotoxic 25 $\mu g/ml$;
Dermatitigenic; Enterorelaxant; FLavor $FEMA\ 10-500$; Fungicide; Hepatoprotective
100 ppm ; Herbicide; Insecticide; Insectifuge; Irritant; Juvabional; Larvicide; Motor-
Depressant; Nematicide $MLC=2,000\ \mu g/ml$; Neurotoxic; Perfumery; Pesticide;
Prostaglandin-Synthesis-Inhibitor 1 $mM\ rbt\ IC_{50}=9.2\ \mu M$; Sedative; Termiticide
 $LD_{100}=5\ mg/g$; Trichomonicide $LD_{100}=300\ \mu g/ml$; Trichomonistat $IC_{50}=10\ \mu g/ml$;
Trypsin-Enhancer; Ulcerogenic; Varroacide; Vasodilator; Vermifuge

FERULIC-ACID Plant:

Allelopathic; Analgesic; Antiaggregant; Antiallergic; Antiarrhythmic; Antibacterial;
Anticancer (Colon); Anticancer (Forestomach); Anticancer (Liver); Anticancer (Skin);
Anticarcinogenic; Antidysmenorrheic; Antiestrogenic; Antihepatotoxic; Antitherpetic;
Antiinflammatory; Antileukemic $IC_{50}=25-56\ \mu g/ml$; Antimitotic; Antimutagenic;
Antineoplastic (Stomach); Antinitrosaminic; Antioxidant 1/2 BHA 1/3 quercetin 3,000
 $\mu M\ EC_{50}=9-15\ \mu g/ml\ IC_{51}=200\ ppm$; Antiradicular $EC_{50}=9-15\ \mu g/ml\ IC_{50}=116-124$
 μM ; Antiserotonin; Antispasmodic; Antithrombic; Antitumor; Antitumor (Colon);
Antitumor (Forestomach); Antitumor (Liver); Antitumor (Skin); Antitumor-Promoter
 $IC_{46}=10\ \mu M$; Antiviral; Arteriodilator; Cancer-Preventive; Candidicide; Cardiac;
Cholagogue; Choleretic; Fungicide; Hepatoprotective; Hepatotropic; Herbicide;
Hydrocholerectic; Hypolipidemic; Immunostimulant; Insectifuge; Metal-Chelator;
Ornithine-Decarboxylase-Inhibitor; Pesticide; Phagocytotic; Preservative;
Prostaglandinogenic; Prostaglandin-Synthesis-Inhibitor 0.58-3.2 mM ; Sunscreen;
Uterosedative 30-100 $mg/kg\ ivn\ rat$

GALLIC-ACID Plant:

ACE-Inhibitor $IC_{50}=7.7\ mM/l$; Analgesic; Antiadenovirus; Antiallergic;

Antianaphylactic; Antiangiogenic; Antiasthmatic; Antibacterial *MIC*=1,000 *ug/ml*; Antibronchitic; Anticancer; Anticarcinomic *ED50*=3; Antiescherichic; Antifibrinolytic; Antiflu; Antihepatotoxic; Antiherpetic *EC50*=>10 *ug/ml*; AntiHIV; Antiinflammatory; Antileishmanic *EC50*=4.4 *ug/ml*; AntiMRSA; Antimutagenic; Antinitrosaminic; Antioxidant 2/3 *BHA* 7 x *quercetin IC44*=33 *ppm*; Antiperiodontitic 10 *ug/ml*; Antiperoxidant *IC50*=69 *uM*; Antipolio; Antiproteolytic 10 *ug/ml*; Antiradicular 7 x *quercetin IC50*=4.9 *uM*; Antiseptic; Antistaphylococcic *MIC*=1,000 *ug/ml*; Antitumor; Antitumor-Promoter; Antiviral; Apoptotic; Astringent; Bacteristat; Bronchodilator; Cancer-Preventive; Candidicide; Carcinogenic; Choleric; Cyclooxygenase-Inhibitor; Cytotoxic 500 *uM*; Floral-Inhibitor; Gram(+)icide *MIC*=1,000 *ug/ml*; Gram(-)icide; Hemostat; Hepatoprotective; Immunomodulator; Immunostimulant; Immunosuppressant; Insulin-Sparing; Myorelaxant; Nephrotoxic; NO-Inhibitor *IC-26*=250 *uM*; Pesticide; Styptic; Topoisomerase-I-Inhibitor; Xanthine-Oxidase-Inhibitor *IC50*=24 *uM*

GAMMA-TERPINENE Plant 36 - 5,460 *ppm*

Acaricide; ACE-Inhibitor 100 *ug/ml* (*weak activity*); Aldose-Reductase-Inhibitor 100 *ug/ml*; Antiacetylcholinesterase *IC23*=1.2 *mM*; Antifeedant; Antioxidant; FLavor *FEMA 1-40*; Insectifuge; Irritant; Perfumery; Pesticide

GAMMA-TERPINEOL Plant:

No activity reported.

GERANIOL Plant 10,660 *ppm*;

Allergenic; Anthelmintic; Antibacterial *MBC*=800 *ug/ml* *MIC*=400 *ug/ml* *MIC*=64 *ug/ml*; Anticancer (Pancreas) *IC50*=265 *uM*; Anticariogenic *MIC*=400 *ug/ml*; Antimelanomic *IC50*=150 *uM/l*; Antisalmonella *MIC*=400 *ug/ml*; Antiseptic 400-800 *ug/ml* 7 x *phenol MIC*=64 *ug/ml*; Antispasmodic; Antitubercular; Antitumor; Antitumor (Pancreas) *IC50*=265 *uM*; Ascaricide; Cancer-Preventive; Candidicide; CNS-Stimulant; Embryotoxic; Emetic 3 x *ipecac*; Expectorant; FLavor *FEMA 1-10*; Fungicide *IC93*=2 *mM*; Herbicide *IC100*-2,000 *uM*; Insectifuge 50 *ppm*; Insectiphile; Mycobactericide *MIC*=64 *ug/ml*; Nematicide *IC86*=100 *ug/ml* *MLC*=1,000 *ug/ml*; Perfumery; Pesticide; Sedative; Trichomonicide *LD100*=300 *ug/ml*

GERANYL-ACETATE Plant 3,380 *ppm*;

Allergenic; FLavor *FEMA 1-20*; Insectiphile; Perfumery; Sedative

HEX-5-EN-1-OL Essential Oil:

No activity reported.

ISOBORNEOL Essential Oil:

Antiherpetic 600 *ppm*; Antiviral; Insectifuge; Motor-Stimulant; Nematicide *MLC*=1 *mg/ml*; Pesticide; Sedative

ISOCHLOROGENIC-ACID Leaf:

Antioxidant; Antiseptic; Cancer-Preventive; Pesticide

ISOEUGENOL Plant:

Allergenic; Antiaggregant *IC50*=0.72 *uM*; Antiinflammatory; Antioxidant *IC79*=30 *ppm*; AntiTNF; Antitumor; Bacteristat; Cancer-Preventive; Candidistat; Cytotoxic 25 *ug/mL*; Fungistat 100 *ug/mL*; Motor-Depressant; Motor-Stimulant; Pesticide; Sedative; Trichomonistat *IC50*=10 *ug/ml*

ISOTHYMONIN Plant:

Antiinflammatory $IC_{37}=1,000\ \mu M$; Antioxidant $10\ \mu M$; COX-1-Inhibitor $IC_{37}=1,000\ \mu M$; COX-2-Inhibitor $IC_{37}=1,000\ \mu M$

KAEMPFEROL Plant:

11B-HSD-Inhibitor; 5-Lipoxygenase-Inhibitor $IC_{50}\ (\mu M)=20$; Aldose-Reductase-Inhibitor $100\ \mu M$; Antiaflatoxin $IC_{50}=3.28\ ppm\ IC_{50}=8.73\ \mu M$; Antiaggregant $30\ \mu M$; Antiallergic; Antibacterial $20\ \mu g/ml$; Anticancer; Antifertility $250\ mg/kg/day/60\ days/orl\ rat$; Antigingivitic $20\ \mu g/ml$; Antiherpetic $23-92\ \mu g/ml$; Antihistaminic; Antiimplantation; Antiinflammatory $20\ mg/kg\ 200\ mg/kg\ ipr\ rat$; Antileukemic $IC_{50}=3.1\ \mu g/ml$; Antilymphocytic; Antimutagenic $ID_{50}=10-40\ nM$; Antioxidant $3/4\ quercetin\ IC_{50}=1.2\ \mu g/ml\ IC_{50}=40\ \mu M$; Antiperiodontic $20\ \mu g/ml$; Antiplateau; Antiradicular $7\ x\ quercetin$; Antiseptic $20\ \mu g/ml$; Antiserotonin $200\ mg/kg\ ipr\ rat$; Antispasmodic; Antistaphylococcic; Antitumor; Antitumor-Promoter; Antiulcer $50-200\ mg/kg\ ipr\ rat$; Antiviral $23-92\ \mu g/ml$; Apoptotic $60\ \mu M$; Aromatase-Inhibitor $IC_{12}=1\ \mu M/l$; cAMP-Phosphodiesterase-Inhibitor; Cancer-Preventive; Carcinogenic; Choleric; Copper-Chelator; COX-2-Inhibitor; Cyclooxygenase-Inhibitor $IC_{50}\ (\mu M)=20$; Cytotoxic; Diaphoretic?; Diuretic; Estrogenic $EC_{50}=0.1-25\ \mu M/l\ EC_{50}=0.56\ \mu M$; Fungicide $20\ \mu g/ml$; Hepatoprotective $IC_{50}=1.30\ ppm\ IC_{50}=5.46\ \mu M$; HIV-RT-Inhibitor $IC_{50}=50-150\ \mu g/ml$; Hypotensive; ICAM-1-Inhibitor; iNOS-Inhibitor $IC_{50}=13.9\ \mu M\ IC_{50}<15\ \mu M$; Inotropic; Iodothyronine-Deiodinase-Inhibitor; JNK-Inhibitor; Lipoxygenase-Inhibitor; MAO-Inhibitor; Mutagenic; Natriuretic; Neuroprotective; NO-Inhibitor $IC_{50}=13.9\ \mu M$; PAF-Inhibitor; Pesticide; Protisticide; Quinone-Reductase-Inducer $3\ \mu M$; Teratologic; TNF-alpha-Inhibitor $IC_{50}=3.99\ \mu M$; Topoisomerase-I-Inhibitor; Topoisomerase-II-Inhibitor $IC_{50}=8.1\ \mu g/ml$; Tyrosinase-Inhibitor $ID_{50}=230\ \mu M$; Uterotrophic $EC_{50}=0.1-25\ \mu M/l$; Vasodilator

L-BORNEOL Plant:

No activity reported.

LABIATIC-ACID Leaf:

Antioxidant

LIMONENE Plant 15 - 5,200 ppm

Acaricide $LC_{100}=8\ \mu M$; AChE-Inhibitor; Allelochemic; Allergenic $1/20th\ carene$; Antiacetylcholinesterase $IC_{22-26}=1.2\ mM$; Antiadenomic; Antialzheimeran?; Antiasthmatic; Antibacterial; Anticancer; Antiesophagitic; Antifeedant; Antiflu; Antiinflammatory; Antilithic; Antilymphomic; Antimetastatic (Stomach); Antimutagenic; Antiobesity; Antiseptic; Antispasmodic $ED_{50}=0.197\ mg/ml$; Antitumor; Antitumor (Breast); Antitumor (Colon); Antitumor (Pancreas); Antitumor (Prostate); Antitumor (Stomach); Antiviral; Apoptotic; Bronchoprotectant; Cancer-Preventive; Candidistat; Chemopreventive; Cholesterolytic; Detoxicant; Enterocontractant; Expectorant; FLavor; Fungiphilic; Fungistat; GST-Inducer; Herbicide $IC_{50}=45\ \mu M$; Histaminic; Immunomodulator; Insecticide $0.37\ \mu M/fly$; Insectifuge; Interleukin-6-Inhibitor; Irritant; Lipolytic; Myorelaxant $50\ mg/kg$; Nematicide $IC=100\ \mu g/ml$; NO-Genic; Ornithine-Decarboxylase-Inhibitor $\sim 750\ mg/kg\ (diet)$; Ozone-Scavenger; P450-Inducer; Peristaltic; Pesticide; Photosensitizer; Sedative $ED=1-32\ mg/kg$; Transdermal

LINALOL Plant 20 - 17,420 ppm

No activity reported.

LINALYL-ACETATE Plant 15 - 4,680 ppm

Anesthetic 0.01-1 ug/ml; Antioxidant 400 ppm; Antispasmodic ED50=0.21 mg/ml; FLavor FEMA 2-15; Motor-Depressant; Perfumery; Sedative

LITHOSPERMIC-ACID Shoot:

Antigonadotrophic; Antithyroid; Cardiogenic

LUTEOLIN Plant:

Aldose-Reductase-Inhibitor EC=3 ppm IC50=0.45 uM rat; Antiallergic; Antiangiogenic IC60-75=10 uM; Antiatherogenic; Antibacterial MIC=500 ug/ml; Anticarcinogenic; Anticarcinomic; Anticataract EC=3 ppm; Anticomplementary; Antidermatic; Antiestrogenic; Antifeedant IC52=<1,000 ppm diet; Antiherpetic 11-23 ug/ml; Antihistaminic <10-15 uM; AntiHIV; Antiinflammatory =indomethacin; Antileukemic 20-50 uM; Antilymphomic; Antimelanomic; Antimutagenic ID50=0.44 ug/ml ID50=2-5 nM; Antinociceptive; Antioxidant IC50=10 uM; Antipolio; Antiproliferant; Antispasmodic; Antitumor 1-50 uM; Antitumor (brain); Antitumor (Colon); Antitumor (Kidney); Antitumor (Lung); Antitumor (Ovary); Antitumor (Pancreas); Antitumor (Skin) 20 uM; Antitumor (Stomach); Antitumor (Thyroid) 12-50 uM; Antitussive; Antiviral 11-23 ug/ml; Aphidifuge; Apoptotic 12-50 uM; Aromatase-Inhibitor IC35=1 uM/l; Beta-Glucuronidase-Inhibitor IC50=~40 uM; Calcium-Antagonist IC50=1.2 uM rbt; Cancer-Preventive; Chemopreventive; Choleric; Cytotoxic 1-50 uM; Deiodinase-Inhibitor; Differentiator IC>40=40 uM; Diuretic; Estrogenic 58% genistein; Hepatoprotective; Hyaluronidase-Inhibitor IC50+=100-250 uM; Hypocholesterolemic; ICAM-1-Inhibitor; IKK-Inhibitor; iNOS-Inhibitor; Iodothyronine-Deiodinase-Inhibitor; Lipoxigenase-Inhibitor; MAPK-Inhibitor; Metalloproteinase-Inhibitor; MMP-9-Inhibitor 20 uM; Myorelaxant; NEP-Inhibitor IC50=>42 uM; NF-kB-Inhibitor; NO-Inhibitor; Pesticide; Proliferant; Prostaglandin-Synthetase-Inhibitor; Protein-Kinase-C-Inhibitor IC70=50 uM; PTK-Inhibitor 10-100 uM; Succinoxidase-Inhibitor; TNF-alpha-Inhibitor IC50=14.44 uM; Topoisomerase-I-Inhibitor; Vasodilator; VEGF-Inhibitor IC50=2-7 uM; Xanthine-Oxidase-Inhibitor IC50=0.11 ug/ml

LUTEOLIN-7-DIGLUCOSIDE Plant:

No activity reported.

LUTEOLIN-7-O-BETA-D-GLUCOSIDE Plant:

No activity reported.

MENTHONE Plant:

Acaricide; Allelopathic; Analgesic; Antiacetylcholinesterase IC50=1.4 mM; Antiaggregant IC50=750; Antiallergic; Antibacillary MIC=1.25 mg/ml; Antibacterial MIC=0.625-5 mg/ml; Antiescherichic MIC=5 mg/ml; Antihistaminic; Antilisteria MIC=1.25 mg/ml; Antisalmonella MIC=5 mg/ml; Antiseptic 2.25 x phenol; Antispasmodic ED50=0.044 mg/ml; Antistaphylococcic MIC=0.625-2.5 mg/ml; Cancer-Preventive; Candidicide MIC=2.5 mg/ml; Cerebrotoxic orl man; Culicide LC50=156-194 mg/l; FLavor FEMA 5-50; Fungicide; Insecticide LC50=156-194 mg/l; Larvicide; Mutagenic; Nematicide MLC=1 mg/ml; Perfumery; Pesticide; Psychoactive; Sedative; Trichomonicide LD100=600 ug/ml

MYRCENE Plant 36 - 676 ppm

ACE-Inhibitor 100 ug/ml; Aldose-Reductase-Inhibitor; Allergenic; Analgesic; Antibacterial; Anticonvulsant; Antimutagenic; Antinitrosaminic; Antinociceptive 10-20 mg/kg ipr mus 20-40 mg/kg scu mus; Antioxidant; Antispasmodic; Chemopreventive; FLavor FEMA 0.5-9; Fungicide; Hypothermic; Insectifuge; Irritant; Myorelaxant 100-

200 mg/kg; P450-2B1-Inhibitor $IC_{50}=0.14 \mu M$; Perfumery; Pesticide

MYRCENOL-8 Plant 15 - 3,900 ppm

No activity reported.

MYRCENOL-8-ACETATE Plant 15 - 2,600 ppm

No activity reported.

N-TRIACONTANE Plant:

No activity reported.

NARINGENIN Plant:

11B-HSD-Inhibitor; Aldose-Reductase-Inhibitor $1 \mu g/ml$ $100 \mu M$ $IC_{25}=1 \mu M$ $IC_{78}=10 \mu M$; Antiacetylcholinesterase; Antiaflatoxin $IC_{50}=12 \mu M$ $IC_{50}=3.37 ppm$; Antiaggregant; Antialzheimeran; Antiamnesic; Anti amyloid-Beta; Antibacterial $MIC=250-500 \mu g/ml$; Anticancer; Antiescherichic; Antiestrogenic; Antifibrotic; Antihepatotoxic; Antiherpetic; AntiHIV $IC_{35}=200 \mu g/ml$; Antiinflammatory $20 ppm$; Antileukemic $IC_{50}>10 \mu g/ml$; Antimutagenic $ID_{50}=50-100 nM$; Antioxidant 7 x *quercetin*; Antiperistaltic; Antiperoxidative; Antiradicular; Antisindhis $IC_{50}=15 \mu g/ml$; Antispasmodic; Antistaphylococcic; Antitumor; Antitumor-Promoter; Antiulcer; Antiviral; Aphidifuge; Aromatase-Inhibitor $IC_{45}=1 \mu M/l$; cAMP-Phosphodiesterase-Inhibitor; Cancer-Preventive; Candidicide; Choloretic; Cytochrome-P450-Inhibitor; Decarboxylase-Inhibitor; Embryotoxic; Estrogenic $EC_{50}=0.1-25 \mu M/l$; Fungicide $2.5 mM$; Fungistat; Hepatoprotective $IC_{50}=12 \mu M$ $IC_{50}=3.37 ppm$; Neuroprotective; P450-Inhibitor; Pesticide; Serotonin-Inhibitor; Teratogenic; TNF-alpha-Inhibitor $IC_{50}=14.41 \mu M$; Topoisomerase-I-Inhibitor; Uterotrophic $EC_{50}=0.1-25 \mu M/l$

NEROLIDOL Plant 80 ppm;

Aldose-Reductase-Inhibitor; Allergenic; Antiacne; Antibacterial $MIC=25-200 \mu g/ml$; Anticariogenic; Antifeedant $1 mM$ (diet); Antistreptococcic; FLavor FEMA 1-10; Nematicide $MLC=1 mg/ml$; Perfumery; Pesticide

OCIMENE Essential Oil:

Insecticide; Perfumery

OLEANOLIC-ACID Plant 6,300 ppm;

Abortifacient; Antiallergic; Antiarrhythmic $40 mg/kg$; Antiatherosclerotic; Antibacterial $MIC=625-1,250 \mu g/ml$; Anticarcinomic; Anticariogenic; Anticomplement $IC_{40-50} 0.01 mM/l$ gpg $IC_{80-90} 0.05 mM/l$ gpg ; Antiedemic $IC_{36}=40 mg/kg$ *ipr rat*; Antifertility; Antigingivitic $MIC=625-1,250 \mu g/ml$; Antihepatotoxic; AntiHIV $EC_{50}=1.7 \mu g/ml$ $IC_{50}=21.8 \mu g/ml$; Antihyperlipidemic; Antiinflammatory $40 mg/kg$ *ipr*; Antiischemic $40 mg/kg$; Antileukemic; Antileukotriene $IC_{50}=17 \mu M$; Antimalarial $IC_{50}=70-89 \mu g/ml$; Antinephritic $IC_{50}=19-24 \mu M$; Antioxidant $IC_{46}=10 \mu M$; Antiperiodontic $MIC=625-1,250 \mu g/ml$; Antiperoxidant $IC_{30}=200 \mu g/ml$; AntiPGE2 $IC_{50}=24 \mu M$; Antiplaque $MIC=625-1,250 \mu g/ml$; Antiplasmodial $IC_{50}=70-89 \mu g/ml$; Antisarcomic; Antiseptic $MIC=625-1,250 \mu g/ml$; AntiTGF-beta $IC_{50}=19-24 \mu M$; Antitumor; Antitumor (Breast); Antitumor (Colon); Antitumor (Kidney); Antitumor (Lung); Antitumor (Pancreas); Antiulcer *>carbenoxolone*; Antiviral $EC_{50}=1.7 \mu g/ml$ $IC_{50}=21.8 \mu g/ml$; Aromatase-Inhibitor; Beta-Blocker; Beta-Glucuronidase-Inhibitor $\sim 100 mg/kg$; Cancer-Preventive; Cardioprotective $40 mg/kg$; Cardiotonic; COX-2-Inhibitor $IC_{50}=295 \mu M$; Cyclooxygenase-Inhibitor; Diuretic; Elastase-Inhibitor $IC_{50}\sim 15 \mu M$; Hepatoprotective; Hypolipemic; Hypotensive; Immunomodulator;

Leucocytogenic; NF-kB-Inhibitor; Phagocytotic; Piscicide; Prostaglandin-Synthesis-Inhibitor *igs mus*; Sedative; Uterotonic; Vasopressor

P-COUMARIC-ACID Leaf 420 ppm;

Aldose-Reductase-Inhibitor 4 ug/ml (*weak activity*); Allelopathic; Antibacterial; Anticlastogen; Antifertility; Antihepatotoxic; Antileukemic $IC_{50}=25-56$ ug/ml; Antinitrosaminic; Antioxidant 1/3 BHA $IC_{24}=30$ ppm; Antiperoxidant $IC_{50}=>100$ uM; Antiseptic; Antispasmodic; Antitumor; Cancer-Preventive; Chemopreventive; Choleric; Cytotoxic; Diaphoretic?; Fungicide; Lipoxigenase-Inhibitor $IC_{11}=5$ mM; Pesticide; Prostaglandigenic; Prostaglandin-Synthesis-Inhibitor; Tyrosinase-Inhibitor $ID_{50}=3,650$ uM

P-CYMEN-8-OL Plant:

No activity reported.

P-CYMENE Plant 146 - 20,800 ppm

Analgesic; Antiacetylcholinesterase $IC_{40}=1.2$ mM; Antibacillary; Antibacterial; Antiflu; Antirheumatologic; Antiviral; FLavor FEMA 12-250; Fungicide; Herbicide $IC_{50}=50$ uM; Insectifuge; Irritant; Laxative; Pesticide; Sedative; Trichomonicide $LD_{100}=50$ ug/ml

P-HYDROXY-BENZOIC-ACID Plant:

Antibacterial; Antimutagenic; Antioxidant; Antiradicular; Antisickling 10.5 ug/ml; Cancer-Preventive; Fungistat $EC_{50}=607$ ug/ml; Immunosuppressant; Pesticide; Phytoalexin; Prostaglandigenic; Secretagogue; Ubiquot

P-HYDROXYBENZOIC-ACID-4-BETA-D-GLUCOSIDE Leaf:

No activity reported.

PHYTOSTEROLS Plant 1,630 - 1,760 ppm

Antiprostatotic; Hypocholesterolemic

PLANTEOSE Seed:

No activity reported.

PROTocatechuic-ACID-4-BETA-D-GLUCOSIDE Leaf:

No activity reported.

ROSMARINIC-ACID Plant 26,000 ppm; Shoot 5,000 - 13,500 ppm

ABeta-Inhibitor; Adenylate-Cyclase-Inhibitor; Aldose-Reductase-Inhibitor; Antiaggregant; Antiallergic; Antialzheimeran; Antianaphylactic 1-100 mg/kg *orl* $ID_{50}=1$ mg/kg *ivn rat* $ID_{50}=10$ mg/kg *ims rat*; Antiatherosclerotic $IC_{50}=0.74$ uM; Antibacterial; Anticoagulant; Anticomplementary 1/2 aspirin 20 mg/kg *ivn*; Antidepressant; Antiedemic 0.316-3.16 mg/kg *ims*; Antigonadotropic; Antihemolytic $IC_{70}=5-10$ um/l; Antihepatotoxic; Antiherpetic 50 ug/ml $EC_{50}=20$ ug/ml; AntiHIV $EC_{50}=40$ ug/ml; Antihyperthyroid; Antiinflammatory $IC_{\sim 58}=1,000$ uM; Antiintegrase 10 ug/ml; Antileukotriene; Antilipoperoxidant; Antimutagenic; Antinephritic; Antioxidant 10 uM $EC_{50}=2.7$ ug/ml; Antioxidant (LDL) $IC_{50}=0.74$ uM; Antiplateque; Antiproliferant; Antiprostaglandin 20 mg/kg *ivn*; Antiproteolytic $IC_{50}=0.9$ mol l; Antipulmonotic; Antiradicular; Antishock; Antithyreotropic; Antithyroid; Antiuremic; Antiviral $EC_{50}=40$ ug/ml; Anxiolytic; Apoptotic; Calcium-Antagonist $IC_{50}=1.2$ uM *rbt*; Cancer-Preventive; COX-1-Inhibitor $IC_{58}=1,000$ uM; COX-2-Inhibitor $IC_{>58}=1,000$ uM; Cytotoxic $TC_{50}=100-150$ ug/ml; Deiodinase-Inhibitor;

Immunomodulator; Immunostimulant; Lipoxygenase-Inhibitor; Neuroprotective; Pesticide; Radioprotective

SALICYLATES *Leaf* 180 - 1,830 ppm

Antiaggregant; Antiinflammatory; Antipyretic; Antiuricosuric; Hyperglycemic; Hypoglycemic; Uricosuric

SALICYLIC-ACID-2-BETA-D-GLUCOSIDE *Leaf*:

No activity reported.

SYRINGIC-ACID-4-BETA-D-GLUCOSIDE *Leaf*:

No activity reported.

SYRINGOYL-GLUCOSE *Leaf*:

No activity reported.

THYMOL *Plant* 15 - 24,100 ppm

Acaricide; Allergenic; Analgesic; Ancylostomicide; Anesthetic; Ankylostomacide; Anthelmintic; Antiacne; Antiaggregant $IC_{50}=0.75$; Antialzheimeran?; Antiarthritic; Antiatherosclerotic $IC_{50}=4 \mu M$; Antibacterial $MIC=50-400 \mu g/ml$; Antibronchitic; Anticariogenic $MIC=200-400 \mu g/ml$; Anticholinesterase; Antihalitotic; Antiherpetic; Antiinflammatory (=indomethacin); Antileptic; Antimelanomic $IC_{50}=120 \mu M/l$; Antineuritic; Antioxidant 100 ppm; Antioxidant (LDL) $IC_{50}=4 \mu M$; Antiperiodontic $MIC=50-200 \mu g/ml$; Antiplaque $MIC=39-625 \mu g/ml$; Antiradicular $EC=60$; Antirheumatic; Antisalmonella; Antiseptic 20 x phenol; Antispasmodic; Antistaphylococcic; Antistreptococcic $MIC=200-400 \mu g/ml$; Antitrichinosic 5%; Antitussive; Ataxigenic; Candidicide 100 $\mu g/ml$ (>Nystatin); Carminative; Counterirritant; Culicide $LC_{50}=36-49 \text{ mg/l}$; Cyclooxygenase-Inhibitor (=indomethacin); Dentifrice; Deodorant; Dermatitigenic; Enterorelaxant; Enterotoxic; Expectorant; FLavor FEMA 2-100; Fungicide; Gastroirritant; Gram(+)icide $MIC=200-400 \mu g/ml$; Gram(-)icide $MIC=50-200 \mu g/ml$; Insecticide 0.22 $\mu M/fly$ $LC_{50}=36-49 \text{ mg/l}$; Insectifuge; Irritant; Larvicide 10 ppm 58 ppm $LC_{50}=36-49 \text{ mg/l}$; Molluscicide; Myorelaxant; Nematicide $MLC=0.1 \text{ mg/ml}$; Perfumery; Pesticide; Sedative; Sprout-Inhibitor; Tracheorelaxant; Trichomonicide $LD_{100}=25 \mu g/ml$; Urinary-Antiseptic; Varroacide; Vermicide

THYMOL-METHYL-ETHER *Plant* 1 - 10,000 ppm

No activity reported.

THYMONIN *Leaf*:

Aldose-Reductase-Inhibitor 10 μM ; Antispasmodic; Myocontractant

THYMUNIC-ACID *Plant*:

No activity reported.

THYMUSAPONIN *Plant*:

No activity reported.

THYMYL-ACETATE *Plant*:

Antiseptic; Carminative; Counterirritant; Irritant; Pesticide; Rubefacient

TRANS-4-THUJANOL *Plant*:

No activity reported.

URSOLIC-ACID *Plant* 15,000 - 18,800 ppm

Analgesic; Antialzheimeran; Antiarrhythmic; Antiarthritic; Antibacterial; Anticancer; Anticancer (Colon); Anticarcinomic; Anticariogenic; Anticholestatic 28-100 mg/kg *orl*; Anticomplement *IC100* 0.1 mM/l *gpg* *IC80-90* 0.05 mM/l *gpg*; Antidiabetic; AntiEBV; Antiedemic; Antiescherichic; Antifibrosarcomic *IC80=10 uM*; Antihepatotoxic 5-20 mg/kg *ipr*; Antihistaminic; AntiHIV 6.7 uM *EC50=2.0 ug/ml* *IC50=6.5 ug/ml* *IC85=18 ug/ml*; Antihyperlipidemic; Antiinflammatory 1/3 *indomethacin* *IC24=500 mg/kg*; Antileishmanic *ED50=20 uM*; Antileukemic *IC50=2.5-17.8 ug/ml*; Antilymphomic; Antimalarial *IC50=28-37 ug/ml*; Antimetastatic *IC80=10 uM*; Antimutagenic *IC57-80=80 mg/kg*; Antinephritic *IC50=6-7.5 uM*; Antiobesity?; Antioxidant *IC50=10 uM*; Antiperoxidant *IC35=200 ug/ml*; Antiplasmodial *IC50=28-37 ug/ml*; Antiproliferative *IC50=15-20 uM*; Antistaphylococcic; AntiTGF-beta *IC50=6-7.5 uM*; Antithromboxane *IC50=50 uM*; Antitrypanosomic; Antitumor; Antitumor (brain); Antitumor (Breast) 0.5% *diet* *IC50=15-20 uM*; Antitumor (Cervix); Antitumor (Colon); Antitumor (Lung); Antitumor (Ovary); Antitumor (Stomach); Antitumor-Promoter; Antiulcer; Antiviral *IC85=18 ug/ml*; Aromatase-Inhibitor; Beta-Blocker; Beta-Glucuronidase-Inhibitor ~100 mg/kg; Cancer-Preventive; Candidicide; Cardioprotective; Cardiotonic; Choleric 5-20 mg/kg *orl*; CNS-Depressant; COX-2-Inhibitor *IC50=130 uM*; Cyclooxygenase-Inhibitor; Cytotoxic 50 ppm 7.2 uM *ED50=3.75 ug/ml*; Diuretic; Elastase-Inhibitor *IC50=~15 uM*; Hepatoprotective 1-100 ug/ml 10 mg/kg; Hypoglycemic; Hypotensive; Immunomodulator; Leucocytogenic; Lipoyxygenase-Inhibitor *IC50=0.18 mM*; MMP-9-Inhibitor *IC80=10 uM*; Ornithine-Decarboxylase-Inhibitor; Pesticide; Piscicide; Potassium-Sparing 3 mg/rat; Protease-Inhibitor *IC85=18 ug/ml*; Protisticide; Quinone-Reductase-Inducer 5 ug/ml; Sodium-Sparing 3 mg/rat; TOPO-2-Inhibitor; Trypanocide; Vasopressor

VANILLIC-ACID *Plant*:

Aldose-Reductase-Inhibitor 100 uM/l; Allelopathic; Anthelmintic; Antibacterial 1.5-15 mg/ml; Anticancer; Antifatigue; Antiinflammatory; Antileukemic *IC50=25-56 ug/ml*; Antioxidant 1/3 *BHA* *IC21=30 ppm*; Antiperoxidant *IC15-65=100-200 ug/ml*; Antiradicular 7 x *quercetin*; Antiseptic; Antisickling; Antitumor; Antitumor-Promoter; Ascaricide; Cancer-Preventive; Choleric; Fungicide; Immunosuppressant; Laxative; Pesticide; Ubiquit

VANILLIC-ACID-4-BETA-D-GLUCOSIDE *Leaf*:

No activity reported.