

Dr. Duke's Phytochemical and Ethnobotanical Databases



Chemicals and their Biological Activities in: *Syzygium aromaticum* (L.) MERR. & L. M. PERRY (Myrtaceae) -- Clove, Clovetree

Chemicals

10-(ALPHA)-CADINOL *Flower*:

No activity reported.

2-HEPTANOL *Flower*:

No activity reported.

2-HEPTANONE *Plant*:

No activity reported.

2-HEPTYL-ACETATE *Flower*:

No activity reported.

2-HEPTYL-BENZOATE *Flower*:

No activity reported.

2-NONANOL *Plant*:

No activity reported.

2-NONANONE *Flower 1 ppm*:

Antiseptic; Pesticide

2-NONYL-ACETATE *Flower 1 ppm*:

No activity reported.

2-UNDECANONE *Flower*:

Anthelmintic; Hirudicide; Nematicide; Pesticide

2ALPHA-HYDROXYOLEANOLIC-ACID-METHYL-ESTER *Plant*:

No activity reported.

ACETYL-EUGENOL *Flower*:

Acaricide $LD_{50}=14.16$ ug/sq.cm of DEET at 37.59 ug/sq.cm; Antiaggregant $IC_{50}=1.1$ uM; Antioxidant $EC_{50}=100$ ul/l; Antiradicular; Cholagogue

ALPHA-AMORPHENE *Flower 1 ppm;*

No activity reported.

ALPHA-CADINENE *Flower:*

No activity reported.

ALPHA-CARYOPHYLLENE *Flower:*

No activity reported.

ALPHA-COPAENE *Flower:*

No activity reported.

ALPHA-CUBEBENE *Flower:*

No activity reported.

ALPHA-HUMULENE *Flower 775 - 850 ppm*

Antitumor; Perfumery

ALPHA-METHYL-FURFURYL *Plant:*

No activity reported.

ALPHA-MUROLENE *Plant:*

No activity reported.

ALPHA-TERPINYL-ACETATE *Flower 155 - 170 ppm*

No activity reported.

ALPHA-YLANGENE *Plant:*

No activity reported.

BENZALDEHYDE *Flower:*

Allergenic; Anesthetic; Antibacterial; Anticancer; Antimutagenic; Antipeptic; Antiseptic; Antispasmodic; Antitumor; Candidicide; FLavor *FEMA 150-800*; Immunostimulant; Insecticide; Insectifuge *50 ppm*; Motor-Depressant; Narcotic; Nematicide *MLC=1 mg/ml*; Pesticide; Sedative; Termiticide *LD100=5 mg/g*; Tyrosinase-Inhibitor *ID50=0.82 mM ID50=820 uM ID50=830 uM ID50=87 ug/ml*

BENZYL-ACETATE *Plant:*

Acaricide; Cardiotoxic; Emetic; FLavor *FEMA 35-800*; Hypotensive; Irritant; Laxative; Tumorigenic; Varroacide

BENZYL-ALCOHOL *Plant:*

Allergenic; Anesthetic; Antiodontalgic; Antipruritic; Antiseptic; FLavor *Fema 200-1,200*; Fungicide; Pesticide; Sedative

BENZYL-TIGLATE *Plant:*

No activity reported.

BETA-CARYOPHYLLENE *Flower:*

No activity reported.

BETA-PINENE *Plant:*

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

BETA-SITOSTEROL-GLUCOSIDE *Plant*:

No activity reported.

CALACORENE *Flower*:

No activity reported.

CALAMENENE *Flower*:

No activity reported.

CALCIUM-OXALATE *Plant*:

Emetic; Inflammatory; Laxative; Lithogenic

CAMPESTEROL *Plant*:

Antioxidant $IC_{37}=10 \mu M$; Hypocholesterolemic

CAMPESTEROL-GLUCOSIDE *Plant*:

No activity reported.

CARVONE *Plant*:

Allergenic; Antiacetylcholinesterase $IC_{50}=1.4-1.8 \text{ mM}$; Antiproliferative; Antiseptic $1.5 \times \text{phenol}$; Cancer-Preventive; Candidistat; Carminative; CNS-Stimulant; FLavor *FEMA 80-3,000*; Fungistat; Insecticide; Insectifuge; Motor-Depressant; Nematicide $MLC=1 \text{ mg/ml}$; Perfumery; Pesticide; Sedative; Trichomonicide $LD_{100}=300 \text{ ug/ml}$; Vermicide

CARYOPHYLLENE *Flower 74,400 - 8,160 ppm*

Aldose-Reductase-Inhibitor; Allergenic; Analgesic; Antiacne; Antiasthmatic; Antibacterial; Anticariogenic $MIC=>1,600 \text{ ug/ml}$; Antidermatitic; Antiedemic; Antifeedant 500 ppm ; Antiinflammatory $IC_{50}=100 \mu M$; Antileishmanic; Antionychyotic; Antiproliferant; Antispasmodic; Antistaphylococcic; Antistreptococcic; Antitumor; Antiulcer; Candidicide; FLavor *FEMA 20-200*; Fungicide; Gastroprotective; Insectifuge; Irritant; Larvicide; Mosquitocide; Perfumery; Pesticide; Sedative; Termitifuge

CARYOPHYLLENE-OXIDE *Plant*:

Antiedemic; Antifeedant; Antiinflammatory; Antitumor; Calcium-Antagonist $ED_{50}=32 \mu M \text{ gpg}$; Fungicide; Insecticide; Pesticide

CHAVICOL *Flower 465 - 510 ppm*

Fungicide; Nematicide; Pesticide

CINNAMALDEHYDE *Flower 1 ppm*:

Acaricide; Adrenergic; Allelochemic $IC_{100}=2.5 \text{ mM}$; Allergenic; Anesthetic; Antiaggregant $200 \mu M$; Antibacterial $MIC=250-1,000 \text{ ug/ml}$; Antienterococcic $MIC=250 \text{ ug/ml}$; Antiescherichic $MIC=500 \text{ ug/ml}$; Antiherpetic; Antiinflammatory; Antiklebsielllic $MIC=1,000 \text{ ug/ml}$; Antileukemic; Antimutagenic; Antipneumonic; Antipseudomonic; Antipyretic; Antisalmonella $MIC=500 \text{ ug/ml}$; Antispasmodic; Antistaphylococcic $MIC=250 \text{ ug/ml}$; Antiulcer 500 mg/kg/orl ; Antiurease; Antiviral;

Cancer-Preventive; Candidicide *MIC*=16-40 ppm; Choleric 500 mg/kg/orl;
Chronotropic; Circulatory-Stimulant; CNS-Depressant; CNS-Stimulant; COX-2-
Inhibitor *IC*₅₀=245 uM; Cyclooxygenase-Inhibitor; Cytotoxic *ED*₅₀=5-60 ug/ml;
FLavor; Fungicide 1.7-250 ppm *MIC*=16-40 ppm; Herbicide; Histaminic;
Hypoglycemic; Hypotensive; Hypothermic; Inotropic; Insecticide; Irritant;
Lipoxygenase-Inhibitor; Monoaminergic; Mutagenic; Nematicide 100 ug/ml;
Perfumery; Pesticide; Sedative; Sprout-Inhibitor; Teratogenic; Termiticide *LD*₁₀₀=5
mg/g *LD*₉₆=1 mg/g; Tranquilizer; Tyrosinase-Inhibitor *ID*₅₀=129 ug/ml *ID*₅₀=970 uM;
Vasodilator; Vibriocide *MIC*=250 ug/ml

CORNUS-TANNIN-2 Plant:

No activity reported.

CRATAEGOLIC-ACID Flower 6 ppm;

No activity reported.

DIMETHYL-FURFURAL Plant:

No activity reported.

ELLAGIC-ACID Plant:

Abortifacient 1.2 mg/kg *ivn mus*; ACE-Inhibitor *IC*₅₀=5 mM/l; Aldose-Reductase-
Inhibitor *IC*₅₀=0.2 uM *IC*₅₀=0.2 ug/ml (*strong activity*); Antiaflatoxin;
Antianaphylactic; Antibacterial 1,250 ug/ml *ID*₅₀=20 ug/ml; Anticancer (Cervix);
Anticancer (Colon); Anticancer (Esophagus); Anticancer (Mouth); Anticariogenic;
Anticataract; Antigingivitic 1,250 ug/ml; AntiGTF *ID*₅₀=20 ug/ml; AntiHIV *IC*₉₀=200
ug/ml; Antihyperthyroid; Antiinflammatory; Antimalarial *IC*₅₀=0.5 uM; Antimutagenic;
Antioxidant 2/3 *quercetin* >50 x *tocopherol* *IC*₉₈=30 ppm; Antiperiodontic 1,250
ug/ml; Antiperoxidant *IC*₅₀=29 uM; Antiplatelet 1,250 ug/ml; Antiplasmodial *IC*₅₀=0.5
uM; Antiseptic 1,250 ug/ml; Antistreptococcal *ID*₅₀=20 ug/ml; Antithyroid; Antitumor;
Antiviral; Antiyeast *IC*₅₀=10.5 uM; Apoptotic; Astringent; Cancer-Preventive 3 ppm;
Candida-SAP-Inhibitor *IC*₅₀=8.4 uM; Cytotoxic 4.6 ug/ml; Deiodinase-Inhibitor;
Detoxicant; Glucosyl-Transferase-Inhibitor *ID*₅₀=20 ug/ml; Hemostatic;
Hepatoprotective *IC*₅₅=30 ug/ml; HIV-RT-Inhibitor; Juvabional; Pesticide; Quinone-
Reductase-Inducer 0.4 g/kg *rat*; Sunscreen 0.5%; Topoisomerase-I-Antagonist;
Xanthine-Oxidase-Inhibitor *IC*₅₀=3.1 uM

EPOXYDIHYDROCARYOPHYLLENE Plant:

No activity reported.

ETHYL-BENZOATE Plant:

FLavor *FEMA* 2-60

ETHYL-CINNAMATE Plant:

FLavor *FEMA* 4-40; Nematicide *MLC*=1,000 uM

ETHYL-HEXANOATE Plant:

No activity reported.

ETHYL-OCTANOATE Plant:

No activity reported.

EUGENINE Flower:

No activity reported.

EUGENITINE Flower:

No activity reported.

EUGENOL Flower 108,655 - 180,000 ppm Leaf 8,500 - 9,000 ppm Stem 8,500 - 9,000 ppm

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

FURFURAL Plant:

Antiseptic; FLavor FEMA 1-30; Fungicide; Insecticide; Irritant; Pesticide

FURFURYL-ALCOHOL Flower:

FLavor FEMA 10-100

GALLIC-ACID Flower:

ACE-Inhibitor $IC_{50}=7.7$ mM/l; Analgesic; Antiadenovirus; Antiallergenic; Antianaphylactic; Antiangiogenic; Antiasthmatic; Antibacterial $MIC=1,000$ ug/ml; Antibronchitic; Anticancer; Anticarcinomic $ED_{50}=3$; Antiescherichic; Antifibrinolytic; Antiflu; Antihepatotoxic; Antiherpetic $EC_{50}=10$ ug/ml; AntiHIV; Antiinflammatory; Antileishmanic $EC_{50}=4.4$ ug/ml; AntiMRSA; Antimutagenic; Antinitrosaminic; Antioxidant 2/3 BHA 7 x quercetin $IC_{44}=33$ ppm; Antiperiodontitic 10 ug/ml; Antiperoxidant $IC_{50}=69$ uM; Antipolio; Antiproteolytic 10 ug/ml; Antiradicular 7 x quercetin $IC_{50}=4.9$ 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 $IC_{50}=24$ uM

GALLOTANNIC-ACID Plant:

No activity reported.

GAMMA-CARYOPHYLLENE *Plant*:

No activity reported.

HUMULEN-7-OL *Flower*:

No activity reported.

HUMULENE-EPOXIDE *Flower*:

No activity reported.

ISOEUGENITENE *Plant*:

No activity reported.

ISOEUGENOL *Plant*:

Allergenic; Antiaggregant $IC_{50}=0.72 \mu M$; Antiinflammatory; Antioxidant $IC_{79}=30 ppm$; AntiTNF; Antitumor; Bacteristat; Cancer-Preventive; Candidistat; Cytotoxic $25 \mu g/mL$; Fungistat $100 \mu g/mL$; Motor-Depressant; Motor-Stimulant; Pesticide; Sedative; Trichomonistat $IC_{50}=10 \mu g/ml$

KAEMPFEROL *Flower*:

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 $20 \mu g/ml$; Antiplaque; 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

LINALOL *Flower* $1 ppm$;

No activity reported.

MASLINIC-ACID *Flower*:

Antiedemic; Antihistaminic; AntiHIV $IC_{100}=18 \mu g/ml$; Antiinflammatory; Antiviral; Protease-Inhibitor

METHYL-ALCOHOL *Plant*:

No activity reported.

METHYL-BENZOATE *Plant*:

Antiseptic; FLavor *FEMA 2-10*; Irritant; Perfumery

METHYL-CHAVICOL *Plant*:

Calcium-Antagonist *IC50=258 uM*; DNA-Binder; Hepatocarcinogenic; Hypothermic; Insecticide; Pesticide

METHYL-EUGENOL *Flower 310 - 340 ppm*

Anesthetic; Antibacterial; Anticonvulsant; Antidote (Strychnine); Antifeedant; Antioxidant *EC50=100 u/l*; Antiradicular; Antiseptic; Cancer-Preventive; Carcinogenic; FLavor *FEMA 5-15*; Fungicide; Fungistat *100 ug/mL*; Insectifuge; Myorelaxant; Narcotic; Nematicide *MIC=1 mg/ml*; Perfumery; Pesticide; Sedative

METHYL-FURFURYL-ALCOHOL *Plant*:

No activity reported.

METHYL-N-AMYLKETONE *Flower*:

FLavor *FEMA 2-25*; Perfumery

METHYL-N-HEPTYL-KETONE *Flower*:

No activity reported.

METHYL-OCTANOATE *Plant*:

No activity reported.

METHYL-SALICYLATE *Flower*:

Allergenic; Analgesic; Anaphrodisiac; Antiinflammatory; Antioxidant; Antipyretic; Antiradicular; Antirheumatalgic; Antiseptic; Antitartar; Cancer-Preventive; Carminative; Counterirritant; Dentifrice; FLavor *FEMA 70-8,000*; Fungicide; Herpetifuge; Insectifuge; Insectiphile; Perfumery; Pesticide

MUCILAGE *Plant*:

Cancer-Preventive; Demulcent; Hypocholesterolemic

NAPHTHALENE *Flower*:

Cataractagenic

OLEANOLIC-ACID *Flower 20,000 ppm*:

Abortifacient; Antiallergic; Antiarrhythmic *40 mg/kg*; Antiatherosclerotic; Antibacterial *MIC=625-1,250 ug/ml*; Anticarcinomic; Anticariogenic; Anticomplement *IC40-50 0.01 mM/l gpg IC80-90 0.05 mM/l gpg*; Antiedemic *IC36=40 mg/kg ipr rat*; Antifertility; Antigingivitic *MIC=625-1,250 ug/ml*; Antihepatotoxic; AntiHIV *EC50=1.7 ug/ml IC50=21.8 ug/ml*; Antihyperlipidemic; Antiinflammatory *40 mg/kg ipr*; Antiischemic *40 mg/kg*; Antileukemic; Antileukotriene *IC50=17 uM*; Antimalarial *IC50=70-89 ug/ml*; Antinephritic *IC50=19-24 uM*; Antioxidant *IC46=10 uM*; Antiperiodontic *MIC=625-1,250 ug/ml*; Antiperoxidant *IC30=200 ug/ml*; AntiPGE2 *IC50=24 uM*; Antiplaque *MIC=625-1,250 ug/ml*; Antiplasmodial *IC50=70-89 ug/ml*; Antisarcomic; Antiseptic *MIC=625-1,250 ug/ml*; AntiTGF-beta *IC50=19-24 uM*; Antitumor; Antitumor (Breast); Antitumor (Colon); Antitumor (Kidney); Antitumor (Lung); Antitumor (Pancreas); Antiulcer *>carbenoxolone*; Antiviral *EC50=1.7 ug/ml IC50=21.8 ug/ml*; Aromatase-Inhibitor; Beta-Blocker; Beta-Glucuronidase-Inhibitor *~100 mg/kg*; Cancer-Preventive; Cardioprotective *40 mg/kg*; Cardiotonic; COX-2-Inhibitor *IC50=295 uM*; Cyclooxygenase-Inhibitor; Diuretic; Elastase-Inhibitor

IC50≈~15 *uM*; Hepatoprotective; Hypolipemic; Hypotensive; Immunomodulator; Leucocytogenic; NF-kB-Inhibitor; Phagocytotic; Piscicide; Prostaglandin-Synthesis-Inhibitor *igs mus*; Sedative; Uterotonic; Vasopressor

PHENYLETHYL-ACETATE Flower 1 ppm;

No activity reported.

RHAMNETIN Plant:

Aldose-Reductase-Inhibitor *IC23*=1 *uM* *IC57*=10 *uM*; Allergenic; Antiaflatoxin 0.41 *ppm* *IC50*=1.29 *uM*; Antibacterial; Anticancer; Antimutagenic; Antioxidant; Antiradicular 7 *x quercetin*; Antitumor; Antitumor-Promoter; Cancer-Preventive; Dye; Hepatoprotective *IC50*=1.29 *uM*; Mutagenic; Pesticide; Quinone-Reductase-Inducer

STIGMASTEROL-GLUCOSIDE Plant:

No activity reported.

STYRALYL-ACETATE Flower 1 ppm;

No activity reported.

TRANS-ANETHOLE Flower:

Analgesic 10-100 *ug/ml*; Anesthetic; Antigenotoxic 40-400 *mg/kg orl mus*; Antioxidant; Antiradicular; Calcium-Antagonist *IC50*=75.2 *uM* *gpg (weak activity)*; FLavor FEMA 1,250-3,150; Sweetener 13 *x sucrose*

VANILLIN Flower:

Allelochemic *IC50*=4.26 *mM*; Allergenic; Antianemic; Anticancer; Antidrepanocytic; Antiescherichic 10-100 *mmol/l*; Antilactobacillic; Antilisteria; Antimutagenic; Antioxidant =*ascorbic acid*; Antipolio; Antiradicular 7 *x quercetin*; Antisickling; Antitumor; Antitumor-Promoter; Antiviral; Antiyeast 8-30 *mM*; Bacteristat 10-40 *mmol/l*; Cancer-Preventive; Candidicide 8-20 *mM*; Choleric; FLavor FEMA 50-20,000; Fungicide; Immunosuppressant; Insectifuge?; Irritant; Perfumery; Pesticide

ZONARENE Flower 1 ppm;

No activity reported.