

Biological Activities for Extracts of Bitter Melon (*Momordica charantia*)

Extracts with the Leaf / Aerial Parts / Entire Plant

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Aerial Parts India	Toxicity Assessment (quantitative)	ETOH-H2O (1:1) Ext	IP Mouse	LD50= >1000 mg/kg	Active		T10126
Aerial Parts India	Toxicity Assessment (quantitative)	ETOH-H2O (1:1) Ext	IP Mouse	LD50= 681.0 mg/kg	Active		T02678
Entire Plant India	Toxicity Assessment (quantitative)	ETOH-H2O (1:1) Ext	IP Mouse	LD50= 681.0 mg/kg	Active		K09153
Entire Plant Thailand	Toxic Effect (general)	ETOH-H2O (1:1) Ext	GI Mouse SC Mouse	10.0 gm/kg 10.0 gm/kg	Inactive Inactive		R00001
Leaf Puerto Rico	Toxic Effect (general)	ETOH (95%) Ext	Oral Mice	500.0 mcg	Inactive		L12432
Entire Plant India	Toxic Effect (general)	Not stated	Oral Rat	0.02% 0.1% 0.5%	Inactive	No adverse influence on food intake, growth and organ weights seen. Hematologic parameters remained normal.	AM1031
Aerial Parts India	Abortifacient Effect	ETOH-H2O (1:1) Ext	Oral Rat (pregnant)	100.0 mg/kg	Inactive		T02678
Root India	Uterine Stimulant Effect	ETOH (95%) Ext	IV Guinea Pig	10.0 mcg/ml	Active	Uterus (non-pregnant).	W04510
Leaf + Stem India	Hemorrhagic Effect	Not stated	IG Rat	Not stated	Active	Uterus (pregnant).	J11478
Leaf USA	Antifertility Effect	Juice	Oral Mouse (Female)	Not stated	Active		W02108
Leaf India	Abortifacient Effect	H2O Ext	Oral Rat (pregnant)	200.0 mg/kg	Inactive		W01362
Leaf India	Abortifacient Effect	ETOH (100%) Ext	IG Rat (pregnant)	200.0 mg/kg	Inactive		L11141
Aerial Parts India	Antiimplantation Effect	ETOH-H2O (1:1) Ext	Oral Rat (Female)	100.0 mg/kg	Inactive		T02678
Leaf India	Antiimplantation Effect	Hot H2O Ext	Oral Rat (Female)	500.0 mg/kg	Inactive		A04902

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Leaf India	Antiimplantation Effect	ETOH(100%) Ext	Intragastric Rat (Female)	200.0 mg/kg	Inactive	vs. early pregnancy.	L11141
Leaf India	Antiimplantation Effect	Not stated	IP Rat (Female)	Not stated	Inactive		T14891
Leaf India	Embryotoxic Effect	H2O Ext	Oral Rat (Female)	200.0 mg/kg	Inactive		W01362
Leaf India	Embryotoxic Effect	Hot H2O Ext	Oral Rat (Female)	500.0 mg/kg	Inactive		A04902
Entire Plant West Indies	Growth Inhibitor Activity	Hot H2O Ext	Rat	2.0 mg	Active	Inhibition of fetal development.	A00706
Entire Plant	Antileukemic Activity	Acidic polysaccharide fraction	In ration Cats	2 mg	Active	Feline infectious leukemia. 60% improvement in symptoms in cats treated with extract for 3-6 months.	AM1074
Entire Plant	Antileukemic Activity	Alkaline polysaccharide fraction	IM Cats	0.5 ml	Active	Feline infectious leukemia. 80% improvement in symptoms in cats treated with extract for 3-6 months.	AM1074
Entire Plant West Indies	Antitumor Activity Antileukemic Activity	Hot H2O Ext	Oral Human Adult	15.0 ml	Active	Administered to one lymphatic leukemia patient. Caused a marked increase in hemoglobin content of blood and decrease in WBC. Dosing 3 times daily for 62 days.	A00706
Leaf Japan	Antitumor Activity	Hot H2O Ext	Oral Mouse	0.5%	Active	Mammary tumors.	AM1001
Entire Plant West Indies	Antitumor Activity	Hot H2O Ext	IP Rat	0.4 mg	Weak Activity	Sarcoma 180 (asc). Slight increase in lifespan.	A00706
Entire Plant USA	Antitumor Activity	H2O Ext	IP Mouse	Not stated	Active	P388 tumor cells.	T09137
Entire Plant	Antitumor Activity	Fraction: Alpha-momorcharin	Not stated	Not stated	Active		AM1042
Entire Plant	Antitumor Activity	Fraction: Alpha-momorcharin	Not stated	Not stated	Active	Inhibition of tumor growth. Related to its ribosome inhibiting activity.	AM1053
Entire Plant	Antitumor Activity	Fraction: Beta-momorcharin	Cell Culture	Not stated	Active	Human squamous carcinoma of the tongue and larynx.	AM1055

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Entire Plant	Antitumor Activity	Fraction: Beta-momorcharin	Not stated	Not stated	Active		AM1042
Entire Plant	Antitumor Activity	Fraction: Momordin	Cell Culture	IC50=10(-13) - 2.75 x 10(-11) M	Active	Inhibited protein synthesis in Hodgkin's disease and anaplastic large-cell lymphoma-derived CD30+ cell lines.	AM1065
Entire Plant	Antitumor Activity	Fraction: Momordin	Mouse	LD50=7mg/kg	Active	vs. mice xenografted with CD30+ human ALCL. 3 day treatment with extract started 24 hours after transplantation, prevented tumor development in 40% of cases and delayed tumor growth rate in others.	AM1065
Leaf Japan	Antiproliferation Activity	Hot H2O Ext	Oral Mouse	0.5%	Active	Uterine adenomyosis.	AM1001
Entire Plant Not stated	Cytostatic Activity	Aqueous Ext	Rat (prostate)	Not stated	Active	Blocked the growth of rat prostatic adenocarcinoma and (3H) thymidine incorporation into DNA.	AM1041
Entire Plant West Indies	Cytotoxic Activity	Hot H2O Ext	Cell Culture	4.0 mg/ml	Active	Hep2 cells.	A00706
Entire Plant	Cytotoxic Activity	Protein Fractuibs	Rat Mice	Not stated	Active Active	Prostate adenocarcinoma. Lymphoma.	AM1070
Entire Plant	Cytotoxic Activity	Fraction: Alpha-momorcharin	Cell Culture	Not stated	Active Active	Melanoma. Hepatoma.	AM1058
Entire Plant	Cytotoxic Activity	Fraction: Momordin	Cell Culture	AC50=1x10(-9) M	Active	Thy 1.1-expressing mouse lymphoma cell line AKR-A	AM1066
Entire Plant	Cytotoxic Activity	Fraction: Momordin	Cell Culture	AC50=3x10(-8) M	Inactive	Mouse lymphoma EL4 cells which lacked Thy 1.1 antigen	AM1066
Entire Plant	Cytotoxic Activity	Fraction: Cucurbitacin B	Not stated	Not stated	Active		AM1051
Entire Plant	Cytotoxic Activity	Fractions: Protein ext	IP Mice	8 mcg twice a week for 0-4 weeks	Active	Activated peritoneal exudate cells; demonstrated cytotoxicity to L1210, P388 and MOLT-4 tumor cells.	AM1033

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Entire Plant	Cytotoxic Activity	Chromatographic Fraction	Cell Culture	Not stated	Active	Cells-BHK-21.	T08985
Entire Plant	Metastasis Inhibition	Chromatographic Fraction	Cell Culture	Not stated	Active	Virus - <i>vesicular stomatitis</i>	T08985
Entire Plant China	Antimutagenic Activity	Juice	Mouse	Not stated	Active	vs. cyclophosphamide induced mutagenesis	AM1043
Entire Plant	Antimutagenic Activity	MEOH insoluable Fraction	Not stated	Not stated	Active	vs. methylnitrosamine, methyl methane sulfonate and tetracycline-induced genotoxicity.	K17876
Leaf Puerto Rico	Anticrustacean Activity	ETOH(95%) Ext	Not stated	LD50=33.0 mcg/ml	Active	<i>Artemia salina</i> Assay system is intended to predict for antitumor activity.	L12432
Leaf Thailand	Antitumor-promoting Activity		Cell Culture (RAJI cells)	200.0 mcg/ml	Strong Activity	vs. 12-o-tetradecanoylphorbol-13-acetate(tpa)-induced epstein-barr virus early antigen activation.	L12243
Leaf Thailand	Antitumor-promoting Activity	MEOH Ext	Cell Culture (RAJI cells)	200.0 mg/ml	Strong Activity	vs. EBV activation induced by HPA (40 ng/ml).	K25144
Leaf China	Antiproliferation Activity	MEOH Ext	Cell Culture (Monocyte)	100.0 mcg/ml	Active		L13363
Leaf Turkey	Immunostimulant Activity	H2O Ext	Human Adult	Not stated	Equiv	Enhanced intracellular killing of neutrophils.	J14375
Leaf China	Immunostimulant Activity	Not stated	IP Mice	0.4 mg	Active	Increased interferon production.	AM1068
Leaf China	Immunostimulant Activity	Not stated	IV Rabbit IV Mice	Not stated Not stated	Active Active	Type 1 interferon inducer. Enhanced natural killer cell activity.	AM1068
Leaf Turkey	Chemotaxis Stimulation	H2O Ext	Human Adult	10.0 mg/ml	Active		J14375
Leaf Cuba	Genotoxicity Activity	Decoction	Not stated	0.10 mg/ml	Active	<i>Aspergillus nidulans</i> Results significant at p < 0.01 level.	K27017
Leaf Nigeria	ATP-ase Inhibition	ETOH (100%) Ext	IG Rat	385.0 mg/kg	Active		L14997
Entire Plant West Indies	DNA Synthesis Inhibition	Hot H2O Ext	Sea Urchin (Ova)	0.1 mg/ml	Active	Antimitotic effect.	A00706

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Nigeria	Protein Synthesis Inhibition	ETOH (100%) Ext	IG Rat (Brain) IG Rat (Liver)	385.0 mg/kg	Active		L14997
Leaf Nigeria	Protein Synthesis Stimulating	ETOH (100%) Ext	IG Rat	385.0 mg/kg	Active Inactive	Increase in muscle and liver protein levels. Reduction in the levels of brain protein.	L14997
Whole Plant China	Antiviral Activity	Not stated	in vitro	Not stated	Active	Induces resistance to viral infection.	AM1068
Entire Plant	Antiviral Activity	Fraction: Alpha-momorcharin	CD4/gp120 interaction assay in vitro	100 nM	Weak Activity Strong Activity	HIV-1 reverse transcriptase and HIV-1 protease. Inhibited HIV-1 integrase 26.1-96.3%.	AM1052
Leaf China	Antiviral Activity	H2O Ext	IP Mice	0.4 mg	Active	vs. <i>Japanese B encephalitis virus</i> . Administered 18 hr, 12 hr and 4 hr before subcutaneous challenge with the virus protected the treated group by 66%.	AM1068
Entire Plant	Antiviral Activity	Fraction: Acidic polysaccharides	Not stated	Not stated	Active	Retrovirus' such as HIV.	AM1074
Entire Plant	Antiviral Activity	Fraction: Acidic polysaccharides	Cell Culture MDCK cells MA104 cells	0.1 mg/ml 1 mu g/ml	Active Active	vs. influenza virus. Vs. herpes virus. Virus inhibited by more than 90%.	AM1074
Entire Plant	Anti-HIV Activity	Fraction: Acidic polysaccharides	Cell Culture MT-4 cells	EC50=15 mu g/ml	Active	vs. HIV. 50% protection against HIV-induced cytopathogenicity.	AM1074
Entire Plant	Anti-HIV Activity	Fraction: Acidic polysaccharides	Oral Kitten	2 mg	Active	Kittns were injected several times with feline HIV. 100% of control group developed feline HIV vs. 20% of the group treated with the extract.	AM1074
Entire Plant	Anti-HIV Activity	Fraction: Acidic polysaccharides	Oral Cat	2 mg	Active	Cats with feline HIV were treated with the extract for 3-6 months. 60% improvement in symptoms in treated group.	AM1074

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Entire Plant	Anti-HIV Activity	Fraction: Aljaline polysaccharides	IM Cats	0.5 ml	Active	Cats with feline HIV were treated for 3-6 months. 80% improvement in symptoms in treated group.	AM1074
Entire Plant	Anti-HIV Activity	Protein Ext	in vitro	IR50=18 mcg/ml 0.175 mcg/ml	Active Active	HIV-1 reverse transcriptase. 82% reduction of viral core protein p24 expression in HIV-infected cells.	H28024
Entire Plant	Anti-HIV Activity	Fraction: Alpha-momorcharin	Not stated	Not stated	Active	Inhibited HIV-1 propagation.	AM1042
Entire Plant	Anti-HIV Activity	Fraction: Beta-momorcharin	CD4/gp120 interaction assay in vitro	100 nM	Weak Activity Strong Activity	HIV-1 reverse transcriptase and HIV-1 protease. Inhibited HIV-1 integrase from 26.1%to 96.3%.	AM1052
Entire Plant	Anti-HIV Activity	Fraction: Alpha-momorcharin	Not stated	Not stated	Active	Related to its ribosome-inhibiting activity.	AM1053
Entire Plant	Anti-HIV Activity	Fraction: Alpha-momorcharin	Cell Culture	Not stated	Active	Inhibition of viral replication and reverse transcriptase activity. Loss of p24 antigen after 4 days of exposure to momorcharin.	AM1076
Entire Plant	Anti-HIV Activity	Fractions: Alpha- and Beta-momorcharin	Cell Culture T lymphocytes and monocyte /macrophages	0.3 and 3 mu.g/ml	Active	T lymphocytes and monocyte/macrophages. HIV infected cells showed a rapid and nearly complete loss of viral antigen; loss of HIV envelope protein or loss of HIV core protein. Uninfected cells largely unaffected.	AM1076
Entire Plant India	Antihyperglycemic Activity	ETOH (95%) Ext	IG Rat	250.0 mg/kg 250.0 mg/kg	Active Inactive Inactive Inactive	vs. rats fasted for 18 hrs. vs. overfed rats. vs. glucose-induced hyperglycemia. vs. streptozotocin-induced hyperglycemia. vs. glucose-induced hyperglycemia.	M22670

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Flower + Leaf Thailand	Antihyperglycemic Activity	MEOH-H2O (1:1) Ext	IG Rat	30.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia. Decreased blood glucose levels by 25% 3 hrs after administration.	J11388
Entire Plant Bangladesh	Hyperglycemic Activity	MEOH Ext	IG Rat	150 mg	Active	Non-diabetic rats. Results were significant at 60 min.	K13947
Entire Plant India	Antihyperglycemic Activity	ETOH(95%) Ext	IG Rat	250.0 mg/kg Dosing for 21 days.	Inactive	vs. rats fasted for 18 hrs. vs. overfed rats. Vs. glucose-induced hyperglycemia. vs. streptozotocin-induced hyperglycemia. vs. glucose-induced hyperglycemia.	M22670
Vine Puerto Rico	Hypoglycemic Activity	Hot H2O Ext	Oral Rabbit	Not stated	Active		A00637
Entire Plant India	Antihyperglycemic Activity	ETOH(95%) Ext	IG Rat	250.0 mg/kg	Active	vs. rats fasted for 18 hrs.	M22670
Flower + Leaf Thailand	Antihyperglycemic Activity	MEOH-H2O (1:1) Ext	IG Rat	30.0 mg/kg	Active	Vs. streptozotocin-induced hyperglycemia. Decreased blood glucose levels by 25% 3 hrs after administration.	J11388
Fruit + Leaf + Stem Trinidad	Antihyperglycemic Activity	Decoction	IP Mouse	0.5 ml	Active	vs. streptozotocin-induced hyperglycemia. Single dose of the extract reduced plasma glucose concentration by about 50% after 5 hours.	M23565
Whole Plant Bangladesh	Hypoglycemic Activity	MEOH Ext	IG Rat	150 mg	Inactive	vs. normal and IDDM rats.	K13947
Flower + Leaf Thailand	Hypoglycemic Activity	MEOH-H2O (1:1) Ext	IG Rat	10.0 mg/kg 30.0 mg/kg	Active Active	Intraperitoneal glucose. Oral glucose.	J11388
Entire Plant India	Hypoglycemic Activity	ETOH-H2O (1:1) Ext	IG Rat	250.0 mg/kg	Inactive		K09153
Leaf Nigeria	Glycolytic Effect	ETOH(100%) Ext	IG Rat (Liver)	385.0 mg/kg	Active		L14997
Leaf Nigeria	Glycolytic Effect	ETOH(100%) Ext	IG Rat (Liver)	385.0 mg/kg	Active		L14997

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Entire Plant India	Spasmolytic Activity	ETOH-H2O (1:1) Ext	Rat	Not stated	Inactive	Uterus(unspec.cond).	K09153
Entire Plant India	Analgesic Activity	ETOH-H2O (1:1) Ext	IG Mouse	Not stated	Inactive	vs. hot plate method. vs. tail clip method.	K09153
Entire Plant India	Anticonvulsant Activity	ETOH-H2O (1:1) Ext	IP Mouse	Not stated	Inactive	vs. supramaximal electroshock-induced convulsions.	K09153
Leaf Nigeria	Anticonvulsant Activity	ETOH(70%) Ext	IP Mouse	Variable	Inactive	vs. metrazole-induced convulsions. vs. strychnine-induced convulsions.	T06510
Whole Plant Origin Not stated	Antiacne Activity	Acidic Ext	External Human Adult	Not stated	Active	Manages various grades of acne: comedos, papules, pustules and nodules. Also active against furuncles.	AM1073
Entire Plant Surinam	Binding Effect	ETOH (80%) Ext	Human Adult	10.0 mcg/ml	Inactive	Did not inhibited radioligand binding to serotonin, dopamine, beta-2-adrenergic or muscarinic receptors nor to adenosine NMDR receptor channel complex.	J12451
Entire Plant Surinam	Binding Effect	ETOH(80%) Ext	Human Adult	100.0 mcg/ml	Active	Inhibited radioligand binding to adrenergic-receptor in human frontal cortex.	J12451
Entire Plant Surinam	Serotonin (5-ht) Receptor Binding Activity	CHCL3 Ext	Calf	100.0 mcg/ml	Inactive	(Hippocampus) Inhibited the binding of 3h-rauwolscine to serotonin receptors.	J10986
Leaf India	Estrogenic Effect	Hot H2O Ext	SC Rat (Female)	20.0 mg	Inactive		A04902
Entire Plant Thailand	Parasympatholytic Activity	ETOH-H2O (1:1) Ext	Guinea Pig (Ileum)	0.01 gm/ml	Weak Activity		W3022A
Leaf Nigeria	CNS Depressant Activity	ETOH (70%) Ext	IP Mouse	Variable	Active		T06510
Entire Plant Thailand	Antihistamine Activity	ETOH-H2O (1:1) Ext	Guinea Pig (Ileum)	0.01 gm/ml	Weak Activity	vs. yeast-induced pyrexia.	W3022A

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Entire Plant Thailand	Antipyretic Activity	ETOH-H2O (1:1) Ext	GI Rabbit	Variable	Inactive		W3022A
Entire Plant Thailand	Hypotensive Activity	ETOH-H2O (1:1) Ext	IV Dog	Variable	Inactive		W3022A
Entire Plant India	Hypothermic Activity	ETOH-H2O (1:1) Ext	IG Rat	Not stated	Inactive		K09153
Entire Plant India	Diuretic Activity	ETOH-H2O (1:1) Ext	IG Rat	510.7 mg/kg	Inactive		K09153
Leaf Nigeria	Alanine Transaminase Level Decrease	ETOH(100%) Ext	IG Rat (Plasma)	385.0 mg/kg	Active		L14997
Leaf Nigeria	Alanine Transaminase Level Decrease	ETOH(100%) Ext	IG Rat (Plasma)	385.0 mg/kg	Active		L14997
Leaf Nigeria	Aspartate Transaminase Level Decrease	ETOH(100%) Ext	IG Rat	385.0 mg/kg	Inactive		L14997
Leaf Nigeria	Aspartate Transaminase Level Decrease	ETOH(100%) Ext	IG Rat	385.0 mg/kg	Weak Activity	L-aspartate transaminase and adenosine triphosphatase activity slightly elevated.	L14997
Fresh Leaf Niigeria	Adenosine Triphosphatase Stimulation	ETOH(100%) Ext	IG Rat	385.0 mg/kg	Weak Activity	L-aspartate transaminase activity unaffected. Adenosine triphosphatase activity reduced.	L14997
Leaf Not Stated	Cyclic GMP Modulation	Aqueous Ext	Rat (prostate)	Not stated	Active	Reduced cyclic GMP levels in tumor.	AM1041
Leaf USA	Guanylate Cyclase Inhibition	H2O Ext	Rat (Liver)	Not stated	Strong Activity		M00425
Leaf Nigeria	Alkaline Phosphatase Inhibition	ETOH(100%) Ext	IG Rat (Plasma)	385.0 mg/kg	Active		L14997
Leaf Nigeria	Alkaline Phosphatase Inhibition	ETOH(100%) Ext	IG Rat (Plasma)	385.0 mg/kg	Active		L14997

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Aerial Parts Panama	AT-1 Receptor Inhibition	CHCL3 Sol Fract ETOAC Sol Fract H2O Ext H2O-insol Ext Hexane Ext MEOH-CH2CL2	Not stated Not stated Not stated Not stated Not stated Not stated	10.0 mcg/ml 10.0 mcg/ml 10.0 mcg/ml 10.0 mcg/ml 10.0 mcg/ml 10.0 mcg/ml	Inactive Inactive Inactive Inactive Inactive Inactive		L18181
Aerial Parts Panama	ET-A Receptor Inhibition	MEOH-H2O(1:1) Ext	Not stated	100 mcg/ml	Active		L18181
Aerial Parts Panama	Y-1 Receptor Inhibition	H2O Ext Hexane Ext MEOH-CH2CL2 1:1	Not stated Not stated Not stated	10.0 mcg/ml 10.0 mcg/ml 10.0 mcg/ml	Inactive Inactive Inactive		L18181
Leaf Philippines	Glucose Transport Inhibition	MEOH Ext	Cell Culture	5.0 mcg/ml	Active	Cells-ehrlich.	J17272
Leaf Philippines	Glucose Transport Stimulation	MEOH Ext	Cell Culture	1.0 mcg/ml	Strong Activity	Ca-ehrlich-ascites.	J16266
Aerial Parts Haiti	Antihepatotoxic Activity	Hot H2O Ext	Cell Culture	1.0 mg	Inactive	Hepatocytes measured by leakage of LDH and ASAT.	K23019
Aerial Parts Haiti	Lipid Peroxide Formation Inhibition	Hot H2O Ext	Cell Culture	1.0 mg	Inactive	Hepatocytes monitored by production of malonaldehyde.	K23019
Aerial Parts Haiti	Radical Scavenging Effect	Hot H2O Ext	Not stated	250.0 mg/liter	Inactive	Measured by decoloration of diphenylpicryl hydroxyl radical solution. Decoloration 6%.	K23019
Entire Plant India	Antiprotozoan Activity	ETOH-H2O (1:1) Ext	Broth Culture	125.0 mg/ml	Active	<i>Entamoeba histolytica</i>	K09153
Aerial Parts Origin Not Specified	Antimalarial Activity	CHCL3 Ext CCHL3 Ext H2O Ext H2O Ext H2O Ext	SC Chicken SC Duckling Oral Chicken Oral Duckling Oral Duckling	42.0 mg/kg 496.0 mg/kg 3.44 gm/kg 2.37 gm/kg 2.37 gm/kg	Inactive Inactive Inactive Inactive Inactive	<i>Plasmodium gallinaceum</i> <i>Plasmodium cathemerium</i> <i>Plasmodium gallinaceum</i> <i>Plasmodium cathemerium</i> <i>Plasmodium lophurae</i>	A00785
Flowers Brazil	Antimalarial Activity	H2O Ext	IG Mouse	1.0 gm/kg	Inactive	<i>Plasmodium berghei</i>	K07998
Aerial Parts Bolivia	Antimalarial Activity	Not stated	Rodent	Not stated	Weak Activity	<i>P. vinckei petteri</i> 279BY (rodent malaria).	AM1016

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Leaf Brazil	Antimalarial Activity	ETOH(95%) Ext	IG Mouse	500.0 mg/kg	Inactive	<i>Plasmodium berghei</i>	J11857
Leaf + Stem Brazil	Antimalarial Activity	ETOH(95%) Ext Infusion	IG Mouse IG Mouse	1.0 gm/kg 1.0 gm/kg	Active Active	<i>Plasmodium berghei</i> <i>Plasmodium berghei</i>	J13276
Leaf + Stem Brazil	Antimalarial Activity	Infusion	Oral Human	Not stated	Inactive	<i>Plasmodium berghei</i>	J13276
Leaf Sierra Leone	Antimalarial Activity	ETOH(100%) Ext	Not stated	IC50=125.0 mcg/ml	Weak Activity	<i>Plasmodium falciparum</i>	L11358
Leaf Togo	Antimalarial Activity	ETOH(95%) Ext	Not stated	IC50 68.4 mcg/ml	Weak Activity	<i>Plasmodium falciparum</i>	M23556
Leaf Puerto Rico	Antimycobacterial Activity	ETOH(95%) Ext	Agar Plate	500.0 mcg	Equiv Equiv	<i>Mycobacterium smegmatis</i> <i>Mycobacterium tuberculosis</i>	L12432
Leaf India	Antibacterial Activity	ETOH(95%) Ext ETOH(95%) Ext Hot H2O Ext Hot H2O Ext	Agar Plate Agar Plate Agar Plate Agar Plate	Undiluted Undiluted Undiluted Undiluted	Active Active Active Equiv	<i>Escherichia coli</i> <i>Staphylococcus aureus</i> <i>Escherichia coli</i> <i>Staphylococcus aureus</i>	W03693
Entire Plant India	Antibacterial Activity	ETOH-H2O(1:1) Ext	Broth Culture	1.0 mg/ml	Inactive	<i>Pseudomonas aeruginosa</i>	K09153
Entire Plant Senegal	Antibacterial Activity	MEOH Ext	Agar Plate	15.0 mg/ml	Active	<i>Sarcina lutea</i>	T09739
Leaf Nigeria	Antibacterial Activity	MEOH-H2O(1:1) Ext	Broth Culture	Not stated	Active Inactive Inactive Inactive Inactive Inactive	<i>Staphylococcus aureus</i> <i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Proteus species</i> <i>Pseudomonas aeruginosa</i> <i>Staphylococcus albus</i>	J00209
Leaf Nigeria	Antibacterial Activity	ETOH(95%) Ext	Agar Plate	0.63 mg/ml 0.63 mg/ml 1.25 mg/ml	Active Active Active	<i>Escherichia coli</i> <i>Salmonella paratyphi</i> <i>Shigella dysenteriae</i>	L07663

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Leaf Nigeria	Antibacterial Activity	MEOH Ext	Agar Plate	2.0 mg/ml	Active Active Active Active Active Active Active Inactive	<i>Corynebacterium diphtheriae</i> <i>Neisseria species</i> <i>Pseudomonas aeruginosa</i> <i>Salmonella species</i> <i>Streptobacillus species</i> <i>Streptococcus species</i> <i>Staphylococcus aureus</i>	M27767
Leaf India	Antibacterial Activity	ETOH(95%) Ext Hot H2O Ext	Agar Plate Agar Plate	Undiluted Undiluted	Inactive Active	<i>Escherichia coli</i> <i>Staphylococcus aureus</i> <i>Escherichia coli</i> <i>Staphylococcus aureus</i>	W03693
Entire Plant India	Antiyeast Activity	ETOH-H2O (1:1) Ext	Broth Culture	1.0 mg/ml	Inactive	<i>Candida albicans</i> <i>Cryptococcus neoformans</i> <i>Sporotrichum schenckii</i>	K09153
Leaf Guatemala	Antifungal Activity	Hot H2O Ext	Broth Culture	1.0 ml	Inactive	<i>Epidermophyton floccosum</i> <i>Microsporum canis</i> <i>Trichophyton mentagrophytes</i> var. <i>Algodonosa</i> <i>Trichophyton mentagrophytes</i> var. <i>Granulare</i>	M27151
Entire Plant India	Antifungal Activity	ETOH-H2O(1:1) Ext	Broth Culture	1.0 mg/ml	Inactive	<i>Aspergillus fumigatus</i> <i>Trichophyton mentagrophytes</i>	K09153
Root Puerto Rico	Molluscicidal Activity	Aqueous Slurry	Not stated	LD100= >1000 ppm	Inactive	<i>Lymnaea columella</i> <i>Lymnaea cubensis</i>	T04621
Leaf Origin Not Specified	Insecticide Activity	H2O Ext	Not stated	40.0 ml/kg	Strong Activity	<i>Blatella germanica</i> <i>Periplaneta americana</i>	W03405
Leaf Origin Not Specified	Insecticide Activity	H2O Ext	Not stated	Variable	Inactive	<i>Oncopeltus fasciatus</i>	W03405
Entire Plant West Indies	Plant Germination Inhibition	Hot H2O Ext	Not stated	20.0 ppm	Active	vs. cotton and broad beans.	A00706
Aerial Parts Colombia	Antivenin Effect	ETOH(100%) Ext	Not stated	Not stated	Inactive	vs. bothrops atrox venom.	L15991

Biological Activities for Extracts of Bitter Melon (*Momordica charantia*)

Extracts of the Fruit / Fruit Juice / Fruit Seed

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Toxicity Assessment (quantitative)	ETOH-H2O (1:1) Ext	IP Mouse	LD50= 681.0 mg/kg	Active		K09153
Fruit USA	Toxicity Assessment (quantitative)	H2O Ext	IP Mouse	LD50= 16.0 mcg/ml	Active		T09137
Fruit USA	Toxicity Assessment (quantitative)	H2O Ext	SC Mouse	LD50= 27.0 mcg/ml	Active		T09137
Seed Not Stated	Toxicity Assessment (quantitative)	H2O Ext	IP Rat	LD50= 25.0 mg/kg	Active		T01769
Fruit India	Toxic Effect (general)	ETOH(95%) Ext ETOH(95%) Ext	Oral Gerbil Oral Gerbil	1.10 gm/kg 150.0 mg/kg	Inactive Weak Activity	Daily dosing for 30 days. Daily dosing for 30 days. 20-30% of animals died within 30 days.	M01152
Fruit India	Toxic Effect (general)	Juice Juice Juice	IP Rabbit IP Rat Oral Human Adult	15.0 ml/kg 40.0 ml/kg 50.0 ml	Active Active Inactive	Died within 18 hours. Died within 18 hours.	J11478
Fruit India	Toxic Effect (general)	H2O Ext	Mouse	200.0 mg/kg	Inactive		L10702
Fruit India	Toxic Effect (general)	Decoction	Oral Human Adult	500.0 mg	Inactive		A14458
Fruit Pakistan	Toxic Effect (general)	Not stated	IG Rabbit	8.0 gm/kg	Inactive		L03572
Fruit India	Toxic Effect (general)	Juice	IG Rabbit	6.0 ml/kg	Active	Death occurred within 23 days.	A14328
Fruit India	Toxic Effect (general)	Juice	IG Rabbit (pregnant)	6.0 ml/kg	Active	Two pregnant animals suffered from uterine hemorrhage and then died.	A14328
Fruit India	Toxic Effect (general)	Juice	IP Rat	15.0 ml/kg	Active	Death occurred within 18 hours.	A14328
Fruit India	Abortifacient Effect	ETOH-H2O (1:1) Ext	Oral Rat (pregnant)	100.0 mg/kg	Inactive		T02678

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Seed Not Stated	Abortifacient Effect	Fraction	IP Rat (pregnant)	8.0 mg/kg	Active	A fraction designated as ap-ii was tested.	T00398
Seed China	Abortifacient Effect	Acetone Ext	IP Mouse (pregnant)	4.0 mcg/gm	Active	Dosing on day 12 of pregnancy.	T10072
Seed China	Abortifacient Effect	H2O Ext	IP Mouse (pregnant)	0.04 mg/ml	Active	Midterm abortion.	K21690
Seed China	Abortifacient Effect	H2O Ext	IP Mouse (pregnant)	80.0 mg/kg	Active		J12388
Fruit India	Antiimplantation Effect	ETOH-H2O (1:1) Ext	Oral Rat (Female)	100.0 mg/kg	Inactive		T02678
Fruit India	Uterine Stimulant Effect	ETOH-H2O (1:1) Ext	Rat (Female)	Not stated	Inactive	Uterus(non-preg).	T02678
Fruit Juice (unripe) Indonesia	Antifertility Effect(unspecified)	Juice	Gastric Intubation Rat (Male)	5.0 ml/kg	Active		T05027
Fruit India	Antifertility Effect (unspecified)	Not stated	IG Mouse (Female)	Not stated	Active		J11478
Fruit Juice Indonesia	Spermicidal Effect	Juice	Rat (Male) (Sperm)	Not stated	Active		T05027
Fruit India	Antispermatogetic Effect	Not stated	IG Dog (Female)	1.75 gm	Active		J11478
Seed India	Antispermatogetic Effect	Benzene Ext ETOH (95%) Ext Pet Ether Ext	IG Rat and IP Rat	250.0 mg/kg 250.0 mg/kg	Active Active	Number of spermatocytes, spermatids and spermatozoa decreased. Steroidogenesis inhibited.	J19694
Fruit India	Antispermatogetic Effect	ETOH (95%) Ext	Oral Dog (Male)	1.75 gm	Active	Daily dosing for 20 days. Seminiferous tubules lacked primary spermatocytes:38.7% of tubule contained normal spermatids.	M01152

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Antispermatogetic Effect	ETOH (95%) Ext	Oral Dog (Male)	1.75 gm Daily dosing for 40 days.	Active	Tubule diameter decreased to 167 microns (220 = control). Testes exhibited variable degrees of spermatogenic arrest, mainly at spermatid stage.	M01152
Fruit India	Antispermatogetic Effect	ETOH (95%) Ext	Oral Dog (Male)	1.75 gm Daily dosing for 60 days.	Active	Seminiferous tubules completely devoid of spermatozoa: 75% completely lacked step 1-8 spermatid.	M01152
Fruit India	Antispermatogetic Effect	ETOH (95%) Ext	Oral Gerbil SC Gerbil (Male)	200.0 mg/kg 200.0 mg/kg Daily dosing for 14 days.	Active	Resulted in reduction in testicular weight and disruption of spermatogenesis without affecting seminal vesicle or prostrate.	M01152
Peel + Seed + Fruit India	Translactational Effect	Not stated	Mice	100 microl	Active	Increased hepatic levels of GST and acid soluble sulfhydryl in lactating dams (p<0.01) after 14 or 21 days of treatment, and translactationally exposed neonates (p<0.05).	AM1022
Fruit India	Hepatotoxic Activity	Juice	IG Rat	Not stated	Inactive		J11478
Fruit Sri Lanka	Respiration(cellular) inhibition	Juice	Gastric Intubation Rat	10.0 ml/kg	Inactive		T12703
Fruit Thailand	Antitumor Activity	Lyophilized Ext	Oral Rat (Female)	6.25 % of diet	Weak Activity		L04084
Fruit India	Antitumor Activity	Aqueous Ext	Oral Mice	Not stated	Active	Protected against the development of skin tumor and increased life expectancy.	AM1010
Fruit India	Antitumor Activity	Aqueous Ext	Oral Mice	Not stated	Active	Reduced carcinogen-induced lipid peroxidation in the liver and DNA damage in lymphocytes.	AM1010
Fruit India	Antitumor Activity	Aqueous Ext	Oral Mice	Not stated	Active	Activated liver enzymes glutathione-S-transferase, glutathione peroxidase and catalase which were depressed after carcinogen exposure.	AM1010

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit USA	Antitumor Activity	H2O Ext	IP Mouse	100.0 mcg/ml	Weak Activity	Cells-CBA/D1.	T09137
Fruit USA	Antitumor Activity	H2O Ext	IP Mouse	Not stated	Active	LEUK-L1210. Drug was pre-incubated with tumor cell line in vitro.	T09137
Fruit USA	Antitumor Activity	H2O Ext	IP Mouse	Not stated	Weak Activity	LEUK-P388. Drug was pre-incubated with tumor cell line in vitro.	T09137
Fruit Turkey	Genotoxicity Activity	Saline Ext	Agar Plate	40.0 mcg	Active	Lymphocytes.	K27792
Fruit Turkey	Mutagenic Activity	Saline Ext Saline Ext	Agar Plate Agar Plate	40.0 mcg 40.0 mcg	Inactive Inactive	<i>Salmonella typhimurium</i> ta100 <i>Salmonella typhimurium</i> ta98	K27792
Fruit China	Cytotoxic Activity	Not stated	Cell Culture	Not stated	Active	Ca-755.	T08662
Fruit China	Cytotoxic Activity	Not stated	Cell Culture	Not stated	Active	LEUK-CML (human).	T08662
Fruit USA	Cytotoxic Activity	H2O Ext	Cell Culture	Not stated	Active	DD-lymphocytes-human-leukemic.	T08985
Fruit USA	Cytotoxic Activity	H2O Ext	Cell Culture	Not stated	Inactive	Lymphocytes-human.	T08985
Fruit Origin Not Specified	Cytotoxic Activity	H2O Ext	Cell Culture	Not stated	Active	Lymphoblasts-human	T01575
Fruit Not Stated	Cytotoxic Activity	H2O Ext	Cell Culture	Not stated	Inactive	Lymphocytes-human.	T01575
Seed Not Stated	Cytotoxic Activity	H2O Ext	Cell Culture	ED50= >1.0 mg/ml	Inactive	Sarcoma (yoshida asc).	A04780
Fruit USA-CA	Cytotoxic Activity	H2O Ext	Cell Culture	CD10= 50.0 mcg/ml	Active	Cells-CBA/D1.	T09137
Fruit USA	Cytotoxic Activity	Juice	Cell Culture	0.14 mg/ml	Active	Melanoma-beta cell-m9 viable cells decreased from 100% to 5% between 18 and 26 hrs.	T04893
Fruit USA	Cytotoxic Activity	Juice	Cell Culture	ED50= 0.16 mg	Active	Lymphocytes-human-leukemic.	T04893
Fruit USA	Cytotoxic Activity	Juice	Cell Culture	ED50= 0.35 mg	Active	Lymphocytes-human.	T04893
Fruit + Seed Not Stated	Antileukemic Activity	Not stated	Not stated	Not stated	Active		AM1033
Fruit Thailand	Antimutagenic Activity	ETOH(80%) Ext	IG Rat (Male) (Colon)	1.0 gm/kg	Active	vs. azoxymethane-induced aberrant crypt foci.	L14935

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Philippines	Antimutagenic Activity	CCL4 MEOH Ext Pet Ether Ext	IG Mouse	5.0 mg/gm 5.0 mg/gm 5.0 mg/gm	Active Inactive Active		M24272
Fruit Thailand	Antimutagenic Activity	CHCL3 Ext Hexane Ext MEOH Ext	Agar Plate	10.0 mg	Inactive	<i>Salmonella typhimurium</i> ta100 vs.direct acting mutagens in the ames mutagenicity test.	L04084
Fruit Thailand	Antimutagenic Activity	CHCL3 Ext Hexane Ext MEOH Ext	Agar Plate Agar Plate Agar Plate	>1.0 mg <1.0 mg <5.0 mg	Active	<i>Salmonella typhimurium</i> ta100 vs. indirect acting mutagens in the ames mutagenicity test.	L04084
Fruit Thailand	Antimutagenic Activity	ETOH(80%) Ext	Agar Plate	Variable	Active	<i>Salmonella typhimurium</i> ta100 vs. mutagenicity of b(alpha)p.	L14935
Fruit Thailand	Antimutagenic Activity	ETOH(80%) Ext	Agar Plate	Variable	Active	<i>Salmonella typhimurium</i> ta98. Inhibited the mutagenicity of IQ, MEIQ, MEIQX, PHIP, GLU-P-2 and AFB1.	L14935
Fruit India	Carcinogenesis Inhibition	H2O Ext	External Mouse	100.0 mcl	Active	vs. DMBA-initiated, croton oil promoted skin tumors.	J14866
Fruit Pulp India	Carcinogenesis Inhibition	H2O Ext	External Mouse	100.0 mcl	Active	vs. DMBA-initiated, croton oil promoted skin tumors.	J14866
Fruit Peel India	Carcinogenesis Inhibition	H2O Ext	External Mouse	100.0 mcg	Active	vs. DMBA-initiated, croton oil promoted skin tumors.	J14866
Seed India	Carcinogenesis Inhibition	H2O Ext	External Mouse	100.0 mcl	Active	vs. DMBA -initiated, croton oil promoted skin tumors.	J14866
Fruit Japan	Tumor Promotion Inhibition	MEOH Ext	Cell Culture	200.0 mcg	Inactive	Virus- <i>Epstein-barr</i> vs. 12-o-hexadecanoylphorbol-13-acetate-induced epstein-barr virus activation.	T15279
Fruit India	Cell Proliferation Inhibition	Not stated Not stated Protein Fraction	Cell Culture Cell Culture Cell Culture	Not stated Not stated Not stated	Active Active Active	Hep2 cells. Sea urchin ova.	J11478
Fruit Thailand	DNA Adduct Formation Inhibition	ETOH(80%) Ext	IG Rat	0.5 gm/kg	Active	vs. AOM-induced DNA adduct formation.	L14935

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Seed China	DNA Synthesis Inhibition	ETOH(100%) Ext	Cell Culture	Not stated	Active	Sarcoma 180(solid).	M27078
Seed China	RNA Synthesis Inhibition	ETOH(100%) Ext	Cell Culture	Not stated	Active	Sarcoma 180(solid).	M27078
Seed China	Protein Synthesis Inhibition	H2O Ext	Not stated	10.0 mcg/ml	Active	Plasma cell tumor-ypc-1.	J12388
Fruit China	Protein Synthesis Inhibition	Not stated	Cell Culture	Not stated	Active	Reticulocyte lysate(rabbit).	T08662
Seed China	Protein Synthesis Inhibition	H2O Ext	Rabbit	10.0 mcg/ml	Active	(reticulocytes)	J12388
Seed China	Protein Synthesis Inhibition	H2O Ext	Rabbit	10.0 mcg/ml	Strong Activity	Reticulocyte lysate (rabbit) 99% inhibition.	K21690
Seed Origin Not Stated	Protein Synthesis Inhibition	H2O Ext	Rabbit	ID50=0.01 mcg/ml	Active	Reticulocyte lysate.	T01769
Fruit + Seed Origin Not Stated	Immunostimulant Activity	Not stated	Mouse	Not stated	Active	Activation of NK cells.	AM1033
Seed Bangladesh	Hyperglycemic Activity	MEOH Ext	IG Rat	150 mg	Active	Non-diabetic rats.	K13947
Seed China	Hyperglycemic Activity	Fractions	Mouse	Not stated	Active		T08662
Seed Bangladesh	Antihyperglycemic Activity	MEOH Ext	IG Rat	2.5 gm/kg	Inactive	vs. streptozotocin-induced hyperglycemia.	K13947
Fruit Not Stated	Antihyperglycemic Activity	Infusion	Oral Human Adult	Not stated	Inactive		J12034
Fruit India	Antihyperglycemic Activity	Ash ETOH(100%) Ext	IG Rat IG Rat	90.0 mg/kg 250.0 mg/kg	Active Inactive	vs. glucose tolerance tests. Vs. glucose tolerance tests.	L05654
Fruit India	Antihyperglycemic Activity	ETOH(95%) Ext Juice	Oral Rabbit Oral Rabbit	3.0 ml/kg 3.0 ml/kg	Active Active	vs. alloxan-induced hyperglycemia. vs. alloxan-induced hyperglycemia.	A07281
Fruit India	Antihyperglycemic Activity	CHCL3 Ext	IG Rabbit	Not stated	Active	vs. alloxan-induced hyperglycemia.	J11478
Fruit India	Antihyperglycemic Activity	Fruit	IG Mouse	Not stated	Active	vs. streptozotocin-induced hyperglycemia.	J11478

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Antihyperglycemic Activity	Fruit	IG Rat	Not stated	Active	vs. alloxan-induced hyperglycemia.	J11478
Fruit India	Antihyperglycemic Activity	Juice	IG Rabbit	Not stated	Active	vs. alloxan-induced hyperglycemia.	J11478
Fruit India	Antihyperglycemic Activity	Fruit Juice Powder	Oral Human Adult	Not stated Not stated Not stated	Active Active Active	Review. Studies in NIDDM and IDDM patients.	J11478
Fruit India	Antihyperglycemic Activity	ETOH(100%) Ext H2O Ext	IG Rat	400.0 mg 400.0 mg	Active Active		L15207
Fruit India	Antihyperglycemic Activity	H2O Ext	Mouse	200.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia. Mean reduction in plasma glucose levels of 15.37% (day 40), 18.68% (day 50) and 22.86% (day 60).	L10702
Fruit India	Antihyperglycemic Activity	H2O Ext	Rat	200.0 mg/kg	Active	vs. alloxan-induced hyperglycemia. Mean reduction in plasma glucose levels of 64.33% (1 month), 66.96% (2 months), 69.7% (3 months) and 70.53% (4 months).	L10702
Fruit China	Antihyperglycemic Activity	Decoction	IG Rat IP Rat	Not stated Not stated	Active Active	vs. alloxan- and streptozotocin-induced hyperglycemia.	J17491
Fruit England	Antihyperglycemic Activity	Fruit	Oral Human Adult	Not stated	Active	A diabetic woman recovered from glycosuria after taking a kind of curry. Karela was believed to be an active ingredient.	M22031
Fruit India	Antihyperglycemic Activity	Acetone Ext	Oral Rat	250.0 mg/kg	Active	Fall in blood sugar of 49% in 30 days. Blood sugar was maintained within normal limits for 2 weeks after treatment ceased. vs. alloxan-induced hyperglycemia.	M22671
Fruit India	Antihyperglycemic Activity	Benzene Ext	IG Rabbit	1.0 gm/kg	Active	vs. glucose-induced hyperglycemia.	M22131

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Antihyperglycemic Activity	CHCL3 Ext	IG Rat (Female)	250.0 mg/kg	Inactive	vs. streptozotocin-induced hyperglycemia.	K19538
Fruit India	Antihyperglycemic Activity	Decoction	Oral Human Adult	500.0 mg	Active		A14458
Fruit Pulp India	Antihyperglycemic Activity	ETOH(95%) Ext	IG Rat	500.0 mg/kg	Active	Non-diabetic rat. Depressed plasma glucose level by 10-15% at 1 hr. Efficacy 25-30% of tolbutamide.	K27156
Fruit India	Antihyperglycemic Activity	ETOH(95%) Ext	IG Rat (Female)	250.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia.	K19538
Fruit India	Antihyperglycemic Activity	ETOH(95%) Ext	IP Rat	75.0 mg	Inactive	vs. streptozotocin-induced hyperglycemia.	T12220
Fruit India	Antihyperglycemic Activity	H2O Ext	IG Rat (Female)	250.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia.	K19538
Fruit India	Antihyperglycemic Activity	H2O Ext	Oral Rat	4.0 gm/day	Active	Dosed for 2 months. Onset of retinopathy retarded. vs. alloxan-induced hyperglycemia.	T14959
Fruit India	Antihyperglycemic Activity	Lyophilized Ext	Oral Mouse	200.0 mg	Active	Urine volume decreased, urinary albumin level decreased, renal hypertrophy prevented. vs. streptozotocin-induced hyperglycemia.	L15573
Fruit India	Antihyperglycemic Activity	Lyophilized Ext	Oral Mouse	200.0 mg	Active	Reduced plasma glucose concentrations by 24.4%.	L15573
Fruit India	Antihyperglycemic Activity	Powder	IG Rat	1.0 gm/kg	Active	vs. alloxan-induced hyperglycemia.	J14657
Fruit India	Antihyperglycemic Activity	Not stated	Oral Human Adult	Not stated	Active		T13893
Fruit Pakistan	Antihyperglycemic Activity	Fruit	IG Rabbit	1.0 gm/kg	Active	vs. alloxan-induced hyperglycemia.	M22028
Fruit Pakistan	Antihyperglycemic Activity	Not stated	IG Rabbit	Not stated	Active	vs. alloxan-induced hyperglycemia.	L03572

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Peru	Antihyperglycemic Activity	H2O Ext	Injection Mouse (Male)	100.0 mg/kg	Active Inactive	vs. type 2 diabetic mice. Lowered serum insulin and blood glucose. Non-diabetic mice.	L10622
Fruit Saudi Arabia	Antihyperglycemic Activity	Decoction 25% Ext	IG Mouse	0.5 ml	Inactive	Maximal change in blood sugar was 4.33%. vs. alloxan-induced hyperglycemia.	M22673
Fruit Saudi Arabia	Antihyperglycemic Activity	Hot H2O Ext 25% Ext	Gastric Intubation Mouse	0.5 ml	Inactive	vs. alloxan-induced hyperglycemia.	T10348
Fruit Thailand	Antihyperglycemic Activity	Hot H2O Ext Hot H2O Ext	Rabbit Rabbit	10.20 mg/kg Not stated	Active Inactive	Diabetic rabbits used. Diabetic rabbits used.	P00050
Fruit Thailand	Antihyperglycemic Activity	Lyophilized Ext Lyophilized Ext	Rabbit Rabbit	1.2 gm/kg 400 mg/kg	Inactive Inactive	vs. alloxan-induced hyperglycemia. vs. alloxan-induced hyperglycemia.	P00096
Fruit United Arab Emirates	Antihyperglycemic Activity	Juice	IG Rat (Male)	10.0 ml/kg	Active	vs. streptozotocin-induced type-1 diabetes.	L18419
Fruit India	Antihyperglycemic Activity	Powder	Oral Rat	0.5 % of diet	Inactive	vs. streptozotocin-induced hyperglycemia.	K29851
Seed India	Antihyperglycemic Activity	H2O Ext	Oral Rabbit	3.0 ml/kg	Inactive	vs. alloxan-induced hyperglycemia.	A07281
Seed India	Antihyperglycemic Activity	Powder	IG Rabbit	Not stated Not stated	Active Active	vs. alloxan-induced hyperglycemia. vs. streptozotocin-induced hyperglycemia.	J11478
Seed India	Antihyperglycemic Activity	Powder	Oral Human Adult	Not stated	Active	Assayed in NIDDM and IDDM patients.	J11478
Fruit India	Antihyperglycemic Activity	ETOH(95%) Ext	IG Rat	200.0 mg/kg	Active	Blood sugar levels decreased 22%. vs. streptozotocin-induced hyperglycemia.	K11849
Fruit India	Antihyperglycemic Activity	Fruit	IG Rat	15.0 gm	Active	vs. alloxan-induced hyperglycemia.	K12995
Fruit India	Antihyperglycemic Activity	Fruit	Oral Human Adult	Not stated	Active		J12465

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Antihyperglycemic Activity	H2O Ext	IG Rat	1.0 gm	Active	Reduction of initial blood sugar level after 3 weeks from 220mg to 105mg. vs. alloxan-induced hyperglycemia.	K12995
Seed India	Antihyperglycemic Activity	Not stated	GI Rabbit	LC50 =0 gm	Active	Streptozotocin-treated animals.	T05236
Fruit India	Antihyperglycemic Activity	H2O Ext	Oral Human Adult (Male)	1.0 gm	Active	The subjects included (433) severe to mild (260) diabetics, aged 42 to 70 years. Blood sugar estimated 2,3,4 & 7 weeks of treatment. Overall fall in blood sugar was 54%. vs.alloxan-induced hyperglycemia.	K12995
Fruit India	Antihyperglycemic Activity	Hot H2O Ext	IG Rat	4.0 gm	Active	vs. alloxan-induced hyperglycemia. Inhibited cataract formation (dependent on blood sugar levels).	M23178
Fruit India	Antihyperglycemic Activity	Juice	IG Rabbit	6.0 ml/kg	Active Active	vs. alloxan-induced hyperglycemia. vs. glucose-induced hyperglycemia.	A14328
Fruit India	Antihyperglycemic Activity	Not stated	Oral Human Adult	100.0 gm	Inactive	Tested in 25 diabetics and 10 control subjects. Daily dosing for 2 weeks.	T06311
Fruit Kenya	Antihyperglycemic Activity	H2O Ext	IG Mouse	16.0 gm/kg	Active	vs. streptozotocin-induced hyperglycemia.	M25031
Fruit Sri Lanka	Antihyperglycemic Activity	Juice	IG Rat	10.0 ml/kg	Inactive	Daily dosing for 30 days. vs. streptozotocin-induced hyperglycemia.	T16092
Fruit Sri Lanka	Antihyperglycemic Activity	Juice	Oral Human Adult	100.0 ml	Not stated	Improved glucose tolerance in 73% of patients with maturity onset diabetes. Juice was given 30 minutes before oral glucose load in the glucose tolerance test.	T12706
Fruit Turkey	Antihyperglycemic Activity	H2O Ext	IG Mouse (Male)	0.5 gm/kg	Active	Significant decrease in nonfasting blood glucose levels of hyperglycemia induced mice. Results significant at p < 0.01 level.	K18219

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit England	Antihyperglycemic Activity	Fruit	Oral Human Adult	0.23 kg/day	Active	Improved glucose tolerance in diabetic patients. Treatment for 8 to 11 weeks. Results significant at $p < 0.05$ level.	T12686
Pulp Barisal	Antihyperglycemic Effect	Aqueous homogenized suspension	Human Adult	Not stated	Active	Reduction ($p < 0.001$) of fasting and post-prandial serum glucose levels seen in 86% of non-insulin dependent diabetic subjects after oral glucose intake.	AM1013
Seed Japan	Antihyperglycemic Activity	H2O Ext	IG Rat	100.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia.	L12140
Seed India	Antihyperglycemic Activity	Decoction	Oral Human Adult	Variable	Inactive		A14461
Seed Japan	Antihyperglycemic Activity	H2O Ext	IG Rat	100.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia.	L12140
Seed India	Antihyperglycemic Activity	MEOH Ext	Oral Rat	10.0 mg/kg	Active	vs. adrenaline induced hyperglycemia.	T14966
Fruit Pulp Bangladesh	Antihyperglycemic Activity	Juice MEOH Ext	IG Rat IG Rat	2.5 gm/kg 2.5 gm/kg	Inactive Active	vs. streptozotocin-induced hyperglycemia.	K13947
Fruit Pulp Japan	Antihyperglycemic Activity	H2O Ext	IG Rat	100.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia.	L12140
Roasted Fruit Pulp Japan	Antihyperglycemic Activity	H2O Ext	IG Rat	100.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia.	L12140
Fruit India	Antihyperglycemic Activity	Benzene Ext	IG Rabbit	1.0 gm/kg	Active	vs. alloxan-induced hyperglycemia.	H24172
Fruit Egypt	Antihyperglycemic Activity	Juice	IG Rat	Not stated	Active		J10963
Fruit Juice India	Antihyperglycemic Activity	Hot H2O Ext	Oral Rat (Male)	5.0 ml/kg	Equip	vs. anterior pituitary extract-induced hyperglycemia.	A07232
Fruit Juice England	Antihyperglycemic Activity	Juice	Oral Human Adult	50.0 ml	Active	Improved glucose tolerance in diabetic patients. Treatment for 8 to 11 weeks. Results significant at $p < 0.01$ level.	T12686

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Juice India	Antihyperglycemic Activity	Juice	IG Mouse (Male)	10.0 ml/kg	Active	vs. streptozotocin-induced hyperglycemia.	L12020
Fruit Juice India	Antihyperglycemic Activity	Juice	IG Rat (Male)	5.0 ml/kg	Active	A glucose tolerance test was used.	A14525
Fruit Juice Sri Lanka	Antihyperglycemic Activity	Hot H2O Ext	IG	Not stated	Active	vs. glucose-induced hyperglycemia.	M17655
Fruit Juice Sri Lanka	Antihyperglycemic Activity	Hot H2O Ext	Oral Human Adult	Not stated	Active	Maturity onset diabetics. 73% improved glucose tolerance. vs. glucose-induced hyperglycemia.	M17655
Fruit Juice China	Antihyperglycemic Activity	Juice Lyophilized Ext	IG Mouse	Not stated Not stated	Active Active	vs. alloxan-induced hyperglycemia.	L19093
Fruit Juice India	Antihyperglycemic Activity	Juice	IG Rabbit	5.0 ml/kg	Active	vs. alloxan-induced hyperglycemia.	L06960
Pulp Juice Bangladesh	Hypoglycemic Activity	Juice	IG Rat	150 mg	Active	Lowered fasting blood glucose levels in non-diabetic rats; (p<0.05 at 120 min).	K13947
Pulp Juice Bangladesh	Hypoglycemic Activity	MEOH Ext Saponin Free	IG Rat	150 mg	Active	Lowered fasting blood glucose levels in non-diabetic rats; (p<0.05 at 60 min / p<0.01 at 120 min).	K13947
Pulp Juice Bangladesh	Hypoglycemic Activity	MEOH Ext Saponin Free	IG Rat	150 mg	Active	Extract fed 45 minutes before oral glucose load in non-diabetic rats.	K13947
Pulp Juice Bangladesh	Hypoglycemic Activity	Juice	IG Rat	150 mg	Inactive	IDDM model rats in fasting or postprandial states.	K13947
Pulp Juice Bangladesh	Hypoglycemic Activity	MEOH Ext Saponin Free	IG Rat	150 mg	Active	Hypoglycemic effect in fasting and postprandial states in NIDDM rats.	K13947
Seed Bangladesh	Hypoglycemic Activity	MEOH Ext MEOH Ext	IG Rat	150 mg	Inactive	A saponin-free extract had no effect in normal and IDDM rats.	K13947
Fruit Juice India	Hypoglycemic Activity	Juice	IG Rabbit	2.0 ml/kg	Equiv		L06960
Seed India	Hypoglycemic Activity	MEOH Ext	IG Rat	Not stated	Active		J11478
Fruit Juice Sri Lanka	Hypoglycemic Activity	Hot H2O Ext	IG	Not stated	Active		M17655

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Juice India	Hypoglycemic Activity	Juice	IG Rabbit	500.0 mg	Inactive		A14310
Fruit Juice India	Hypoglycemic Activity	Not stated	IG Rabbit	200.0 mg 500.0 mg	Inactive Inactive		W00276
Fruit Pulp Sri Lanka	Hypoglycemic Activity	Juice	Gastric Intubation Rat	10.0 ml/kg	Active		T08396
Fresh Fruit Egypt	Hypoglycemic Activity	Juice	IG Rat	Not stated	Active		J10963
Fruit Pulp Bangladesh	Hypoglycemic Activity	Juice	IG Rat	2.5 mg/kg	Active	Extract fed 45 minutes before the oral glucose load.	K13947
Fruit Pulp Bangladesh	Hypoglycemic Activity	MEOH Ext saponin free	IG Rat	2.5 gm/kg	Active	Non-diabetic rats. Result significant at 60-120 min.	K13947
Fruit Pulp Bangladesh	Hypoglycemic Activity	MEOH Ext saponin free	IG Rat	2.5 mg/kg	Active	NIDDM rats. Hypoglycemic effect in fasting and postprandial states.	K13947
Fruit Pulp Bangladesh	Hypoglycemic Activity	Juice	IG Rat	2.5 mg/kg	Inactive	IDDM rats.	K13947
Seed + Whole Plant Bangladesh	Hypoglycemic Activity	MEOH Ext MEOH Ext	IG Rat	2.5 mg/kg	Inactive Inactive	A saponin-free extract had no effect in normal and IDDM rats.	K13947
Seed India	Hypoglycemic Activity	ETOH-H2O(1:1) Ext MEOH Ext Saline Ext	Oral Rat Oral Rat Oral Rat	20.0 mg/kg 10.0 mg/kg 20.0 mg/kg	Active Active Active		T14966
Fruit + Leaf + Stem Trinidad	Hypoglycemic Activity	Decoction	IP Mouse (Male)	0.3 ml	Active	1.0 ml of extract was equivalent to 10 gm of dried plant material. Following a single dose of the extract, basal plasma glucose concentrations were reduced after 4 and 8 hours. Glucose tolerance was also improved 8 hr after dosing. Plasma insulin levels were unaffected by the extract.	M23565

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit + Leaf + Stem Trinidad	Hypoglycemic Activity	Decoction in Drinking Water	Mouse (Male)	0.2%	Inactive	Daily dosing of the extract for 13 days followed by IP glucose tolerance. Plasma glucose and plasma insulin were measured. There was no significant alteration of body weight, food intake, fluid intake or plasma concentrations of glucose or insulin. Glucose tolerance, measured on day 13, was improved by treatment.	M23565
Fruit Turkey	Hypoglycemic Activity	ETOH-H2O(1:1) Ext H2O Ext	IG Mouse (Male)	0.5 gm/kg 0.5 gm/kg	Inactive Inactive		K18219
Fruit Pakistan	Hypoglycemic Activity	Fruit	IG Rabbit	0.5 gm/kg	Active		M22028
Fruit Pakistan	Hypoglycemic Activity	Not stated	IG Rabbit	Not stated	Active		L03572
Fruit India	Hypoglycemic Activity	Fruit	IG Mouse	Not stated	Active		J11478
Fruit India	Hypoglycemic Activity	Juice	IG Rat	Not stated	Active	vs. ant.pituitary extract-induced hyperglycemia.	J11478
Fruit China	Hypoglycemic Activity	Not stated Juice	IV Rabbit Gastric Intubation Rabbit	12.0 microcuries/ kg	Active Active	vs. alloxan-induced hyperglycemia.	T08662
Fruit China	Hypoglycemic Activity	Not stated	Mouse	Not stated	Active	Tested in diabetic mice.	T08662
Fruit India	Hypoglycemic Activity	Decoction	IG Rabbit	200.0 mg/kg	Active		A14458
Fruit India	Hypoglycemic Activity	ETOH(95%) Ext	IG Rat	500.0 mg/kg	Active	In streptozotocin-induced diabetic rats it improved oral glucose tolerance and reduced plasma glucose by 26% at 3.5 hrs (metformin caused 45-50% reduction at 1, 2 and 3.5 hrs).	K27156
Fruit India	Hypoglycemic Activity	ETOH(95%) Ext	IG Rat (Female)	250.0 mg/kg	Active	Potentialiation by using three plants in combination.	K19538

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Hypoglycemic Activity	ETOH-H2O(1:1) Ext	IG Rat	250.0 mg/kg	Active		K09153
Fruit India	Hypoglycemic Activity	H2O Ext	Rat (Female)	250.0 mg/kg	Active	Potential effect if used with <i>C. longa</i> and <i>E. officinalis</i> .	K19538
Fruit India	Hypoglycemic Activity	H2O Ext	Oral Rabbit	10.0 mg/kg	Active	Drop in blood sugar of 15 mg relative to inert-treated control.	A14379
Fruit Jamaica	Hypoglycemic Activity	Hot H2O Ext	Gastric Intubation Dog	200.0 ml	Weak Activity	Dose = 20 gm of air-dried plant material.	T07170
Fruit Thailand	Hypoglycemic Activity	Glycoside Mixture Lyophilized Ext Lyophilized Ext	Rabbit Rabbit Rabbit	10.0 mg/kg 1.2 gm/kg 400.0 mg/kg	Active Inactive Inactive		P00096
Fruit Thailand	Hypoglycemic Activity	Hot H2O Ext	Rabbit	5 mg/kg 10 mg/kg 20 mg/kg	Inactive		P00050
Fruit Japan	Hypoglycemic Activity	Powder Powder	Oral Rat (Male)	1.0 % of diet 1.0 % of diet	Active Inactive	Serum vs. fed cholesterol-free diets. Serum vs. fed cholesterol- enriched diets.	L11054
Fruit India	Hypoglycemic Activity	Fruit	Oral Human Adult	15.0 gm/day	Equiv	The dose was given for 21 days. The fall in blood sugar was 25% of the initial level; however statistically is insignificant. The overall fall in blood sugar was 25%.	K12995
Fruit India	Hypoglycemic Activity	Juice	IG Rabbit	6.0 ml/kg	Active		A14328
Fruit Israel	Glucose Absorption Inhibition	Aqueous High Speed Supernatant	Rat (Intestine, small)	50.0 mcl	Active		T12135
Fruit Brazil	Glucose Absorption Inhibition	Aqueous High Speed Supernatant	Rat (Adipocytes)	50.0 mcl	Inactive		T12135
Fruit Kenya	Glucose Absorption Inhibition	H2O Ext	IG Mouse	16.0 gm	Inactive	vs. streptozotocin-induced hyperglycemia.	M25031

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Israel	Glucose Absorption Inhibition	Acetone Ext ETOH(95%) Ext	Rat Rat	125.0 mg/ml 125.0 mg/ml	Active Inactive	(Intestine, small) (Adipocytes)	T12135
Fruit Peru	Glucose Uptake Induction	H2O Ext	Injection Mouse (Male)	100.0 mg/kg	Active	Muscle content of GLUT4 transporter was increased (p<0.01).	L10622
Fruit India	Glucose Uptake Induction	Juice	Diaphragm	Not stated	Active		J11478
Fruit Sri Lanka	Glucose Uptake Induction	Juice	Gastric Intubation Rat	10.0 ml/kg	Active	Results significant at p <0.001 level.	T12703
Pulp Juice Bangladesh	Insulin Release Stimulation	Not stated	Mouse (Islets)	Not stated	Active		K13947
Fruit India	Insulin Level Increase	Not stated	Human Adult Mouse Pig	Not stated Not stated Not stated	Active Active Active		J11478
Fruit Pulp India	Insulin Level Increase	ETOH(95%) Ext	IG Rat	500.0 mg/kg	Inactive		K27156
Fruit India	Insulin Potentiating Effect	ETOH(100%)Ext H2O Ext	IG Rat IG Rat	400.0 mg 400.0 mg	Active Active		L15207
Root Peel India	Hypoglycemic Activity	Not stated	Not stated	Not stated	Active		T11569
Fruit India	Glucose Absorption Inhibition	ETOH(95%) Ext H2O Ext	Intestine (small)	Not stated Not stated	Active Active		J11478
Fruit Juice Sri Lanka	Glucose Uptake Induction	Hot H2O Ext	Not stated	Not stated	Active		M17655
Fruit India	Glucose Utilization Inhibition	ETOH(95%) Ext	Not stated	Not stated	Active		J11478
Fruit Sri Lanka	Insulin Induction	H2O Ext	Cell Culture (Pancreatic islets)	1.0 mg/ml	Active		M21802
Fruit India	Insulin Release Stimulation	H2O Ext	Islets of Langerhan	Not stated	Active		J11478
Fruit India	Glucose-6-phosphat-ase Inhibition	ETOH(95%) Ext	Liver	Not stated	Active		J11478
Fruit India	Hexokinase Inhibition	ETOH(95%) Ext	Agar Plate	Not stated	Active	Yeast.	J11478

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Gluconeogenesis Inhibition	Juice ETOH(95%) Ext	Kidney Liver	Not stated Not stated	Equiv Active		J11478
Fruit Juice Sri Lanka	Gluconeogenesis Inhibition	Hot H2O Ext	Kidney	Not stated	Inactive		M17655
Fruit Juice Sri Lanka	Liver Glycogen Increase	Hot H2O Ext	Liver	Not stated	Active	Muscle glycogen levels also increased.	M17655
Fruit India	Enzyme Modulation	H2O Ext	Rat Mouse	200 mg	Active	In streptozotocin-induced diabetic mice and alloxanized-induced diabetic rats, momordica restored hepatic and skeletal muscle glycogen content, hepatic glucokinase, hexokinase, glucose-6-phosphate and phosphofructokinase.	L10702
Fruit India	Fructose Diphosphatase Inhibition	ETOH(95%) Ext	IG Rat	200.0 mg/kg	Active	Activity decreased 20%.	K11849
Fruit India	Glucose-6-phosphat-ase Inhibition	ETOH(95%) Ext	IG Rat	200.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia. Activity decreased 23%.	K11849
Fruit India	Glucose-6-phosph-ate Dehydrogenase Stimulation	ETOH(95%) Ext	IG Rat	200.0 mg/kg	Active	vs. streptozotocin-induced hyperglycemia.	K11849
Fruit Israel	Glucose Oxidase Inhibition	ETOH(95%) Ext	Rat (Adipocytes)	125.0 mg/ml	Active	Liver homogenates.	T12135
Fruit Brazil	Glucose Oxidase Inhibition	Supernatant	Rat (Adipocytes)	50.0 mcl	Active		T12135
Fruit Brazil	Glucose Oxidase Inhibition	Supernatant	Rat	50.0 mcl	Active	Liver homogenates.	T12135
Fruit Brazil	Hexokinase Inhibition	Supernatant	Rat	50.0 mcl	Active	Liver homogenates.	T12135
Fruit Israel	Hexokinase Inhibition	ETOH (95%) Ext	Rat	125.0 mg/ml	Active	Liver homogenates.	T12135
Fruit Sri Lanka	Liver & Muscle Glycogen Increase	Juice	GI Rat	10.0 ml/kg	Active	Results significant at p < 0.01 level.	T12703

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Pulp India	Glycogenic Effect	ETOH (95%) Ext	IG Rat	500 mg/kg	Active	4-5-fold increase in the rate of glycogen synthesis.	K27156
Fruit India	Antipancratotoxic Activity	Powder	IG Rat (Pancreas)	1.0 gm/kg	Active	Treatment significantly countered loss of islets and beta cells. Vs. streptozotocin-induced hyperglycemia.	J14657
Fruit Juice United Arab Emirates	Miscellaneous Effects	Fruit Juice	IG Rat (Male)	10.0 ml/kg	Active	Study of the effect of fruit juice on the increase of alpha, beta, and gamma cells in pancreas of streptozotocin-induced diabetic rats. There was a significant increase in beta and delta cells.	L03902
Fruit India	Analgesic Activity	MEOH Ext	Mouse	Not stated	Active		J11478
Fruit India	Analgesic Activity	ETOH-H2O Ext	IG Mouse	Not stated	Inactive		K09153
Seed India	Analgesic Activity	MEOH Ext	SC Mouse SC Rat	ED50=5.0 mg/kg	Active Equiv	Dose given 30 min before challenge to both rat and mouse. Naloxone did not inhibit effect. Vs. acetic acid-induced writhing.	M25712
Fruit India	Anticonvulsant Activity	ETOH-H2O Ext	IP Mouse	Not stated	Inactive	vs. hot plate method. vs. tail clip method.	K09153
Fruit Nigeria	Anticonvulsant Activity	ETOH(70%) Ext	IP Mouse	Variable	Inactive	vs. metrazole-induced convulsions. vs. strychnine-induced convulsions.	T06510
Fruit India	Spasmodic Activity	ETOH-H2O Ext	Rat	Not stated	Inactive	Uterus (unspec.cond).	K09153
Fruit India	Uterine Relaxation Effect	ETOH-H2O Ext	Rat (Female)	Not stated	Inactive	Uterus (non-preg).	T02678
Fruit India	Antiinflammatory Activity	Not stated	Rat	Not stated	Active	vs. carrageenan-induced pedal edema.	J11478
Fruit Turkey	Antiulcer Activity	ETOH(95%) Ext Hexane Ext CHCL3 Ext Essential Oil	IG Rat	500.0 mg/kg 500.0 mg/kg 500.0 mg/kg 500.0 mg/kg	Inactive Inactive Inactive Inactive		K11898

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Turkey	Antiulcer Activity	ETOH(100%) Ext ETOH(100%) Ext ETOH(100%) Ext Hexane Ext Olive Oil Ext Olive Oil Ext	IG Rat (Stomach)	310.0 mg/kg 310.0 mg/kg 620.0 mg/kg 290.0 mg/kg 330.0 mg/kg 660.0 mg/kg	Active Active Active Active Active Inactive	vs. 80% ethanol-induced ulcers. vs. DDC-induced ulcerogenesis. vs. HCL/ethanol-induced ulcers. vs. 80% ethanol-induced ulcers. vs. 80% ethanol-induced ulcers. vs. HCL/ethanol-induced ulcers.	L09878
Fruit India	Diuretic Activity	ETOH-H2O Ext	IG Rat	510.7 mg/kg	Inactive	vs. supramaximal electroshock-induced convulsions.	K09153
Fruit India	Antihyperuricemic Acitivity	Acetone Ext	Oral Rat	250.0 mg/kg	Inactive	vs. alloxan-induced hyperglycemia.	M22671
Fruit India	Hypothermic Activity	ETOH-H2O Ext	IG Rat	Not stated	Inactive		K09153
Seed India	Cholesterol Level Increase	H2O Ext	IG Rat IP Rat	250.0 mg/kg	Active		J19694
Fruit India	Hypercholesterolemic Activity	Not stated	IG Dog	1.75 gm	Active		J11478
Fruit India	Antihypercholesterol- emic Activity	Acetone Ext	Oral Rat	250.0 mg/kg	Active	vs. alloxan-induced hyperglycemia.	M22671
Fruit India	Antihypercholesterol- emic Activity	Fruit Powder	Oral Human Adult (Male)	2.0 gm	Active	Ten mild diabetic patients (23-28 years old) were used in the study. 11 day treatment.	M27532
Fruit Japan	Hypolipemic Activity	Powder	Oral Rat (Male)	1.0 % of diet	Inactive Active Active	Serum vs.fed cholesterol-free and-enriched diets. Elevated HDL levels. Reduced total cholesterol and triglyceride levels in both the presence and absence of dietary cholesterol.	L11054
Fruit India	Hypocholesterolemic Activity	Fruit	IG Rat	Not stated	Active		J11478

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Turkey	Hypocholesterolemic Activity	Juice	IG Rat (Male)	10.0 ml/kg	Active	vs. streptozotocin-induced type-1 diabetes. Over a 10 week period momordica returned to normal the increased cholesterol, triglycerides and phospholipids and LPO and malonedialdehyde as well as the reduced HDL.	L18419
Fruit Japan	Hypocholesterolemic Activity	Powder	Oral Rat (Male)(Liver)	1.0 % of diet	Active	In the presence and absence of dietary cholesterol.	L11054
Oil Japan	Hypocholesterolemic Activity	Oil	Oral Rat	2%	Active Inactive	Reduced free cholesterol. Increased HDL. No change in total cholesterol.	AM1005
Freeze Dried Fruit Japan	Hypotriglyceridemia Activity	Powder	Oral Rat (Male)	1.0 % of diet	Active	Liver vs. fed cholesterol-free and-enriched diets.	L11054
Fruit Turkey	Hypotriglyceridemia Activity	Juice	IG Rat (Male)	10.0 ml/kg	Active	vs. streptozotocin-induced type-1 diabetes.	L18419
Fruit Hong Kong	Antilipolytic Activity	Acetone Ext	Rat (Adipocytes)	500.0 mcg	Active	vs. Acta- Epinephrine bitartrate- and Glucagon- induced lipolysis.	T11178
Seed India	Lipolytic Effect	Seeds	Gastric Intubation Rabbit	3.0 gm	Active	In streptozotocin-treated animals.	T05236
Seed Hong Kong	Antilipolytic Activity	Acetone Ext	Rat (Adipocytes)	500.0 mcg	Active	vs. Acta- and epinephrine bitartrate- induced lipolysis.	T11178
Fruit Japan	Lipid Peroxide Formation Inhibition	Not stated	IG Rat (Cerebral Cortex)	100.0 mg	Active	vs. Fe(3+)-induced peroxidation.	K27939
Fruit India	Lipid Peroxide Formation Stimulation	ETOH(100%) Ext	IG Mouse (Male) (Heart)	400.0 mg/kg	Active		L10141
Fruit India	Glycogen Content Increased	Juice	Liver	Not stated	Active		J11478
Fruit Juice India	Apoptosis Inhibition	Juice	Cell Culture	0.1%	Active	vs. RIN cells. vs. .streptozotocin-induced hyperglycemia.	L12020

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit + Seeds Hong Kong	Antilipolytic Activity	Acid-ETOH Ext	Adipocytes	Variable	Active	Inhibited lipolysis.	T13897
Fruit Juice Sri Lanka	Hyperlipidemic Activity	Hot H2O Ext	Adipose tissue	Not stated	Active	vs. triglyceride content of adipose tissue.	M17655
Seed India	Lipogenesis Stimulation	ETOH(95%) Ext H2O Ext Saline Ext	Adipocytes	Not stated Not stated Not stated	Active Active Active		J11478
Fruit India	Lipogenesis Stimulation	ETOH(95%) Ext H2O Ext Saline Ext	Adipocytes Adipocytes Adipocytes	Not stated Not stated Not stated	Active Active Active		J11478
Fruit India	Radical Scavenging Effect	Juice	Not stated	Not stated	Active		J11478
Fruit Japan	Radical Scavenging Effect	Not stated	Not stated	IC50=0.83 mg/ml	Active	Fenton reaction assay.	K27939
Fruit Japan	Radical Scavenging Effect	Not stated	Not stated	IC50=4.5 mcg/ml	Active	Diphenyl picrylhydralazine assay.	K27939
Fruit Japan	Superoxide Radical Scavenging Activity	Not stated	Not stated	IC50=0.6 mg/ml	Active	Hypoxanthine/xanthine oxidase system.	K27939
Fruit Juice India	Oxygen Radical Inhibition	Juice	Not stated	0.1 ml	Active	A heat, acid and alkali-stable component of extract acted as scavenger of both superoxide and hydroxy radicals. At the given concentration 90.16% scavenging of superoxide seen.	T16453
Fruit Juice India	Oxygen Radical Inhibition	Juice	Not stated	0.33 ml	Active	A heat, acid and alkali-stable component of extract acted as scavenger of both superoxide and hydroxy radicals. At the given concentration 87.70% scavenging of hydroxy radical seen.	T16453
Fruit Juice India	Antioxidant Activity	Juice	Cell Culture	1.0% 5.0%	Active Active	vs. streptozotocin-induced hyperglycemia.	L12020

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Oil Japan	Oxidative Activity	Oil	Oral Rat	2%	Active	Increase in hyperoxides, possibly due to the occurrence of c9,t11-18:2 in liver.	AM1005
Fruit Juice India	Antioxidant Activity	Juice	IG Mouse (Male)	10.0 ml/kg	Active	vs. streptozotocin-induced hyperglycemia.	L12020
Fruit Japan	Antioxidant Activity	Not stated	Rat (Cerebral Cortex)	1.0 mg/ml	Active	Fe(2+)/ascorbate-induced oxidative damage.	K27939
Fruit United Arab Emirates	Antioxidant Activity	Juice	Rat	Not stated	Active	Reversed the effect of chronic diabetes on P450-dependent monooxygenase activities and glutathione-dependent oxidative stress related lipid peroxidation and glutathione-S-transferase activities.	AM1015
Fruit United Arab Emirates	Antioxidant Activity	Juice	Rat	Not stated	Active	A 65% decrease in hepatic glutathione (GSH) content and glutathione-S-transferase (GST) activity and an increase in brain GSH and GST activity observed in diabetic rats. Renal GST was reduced while GSH remained slightly higher than controls.	AM1015
Fruit Nigeria	CNS Depressant Activity	ETOH(70%) Ext	IP Mouse	Variable	Active		T06510
Fruit India	Thyroxine Level Decrease	ETOH(100%) Ext	IG Mouse (Male) (Serum)	400.0 mg/kg	Active		L10141
Fruit India	Triiodothyronine(T3) Level Decrease	ETOH(100%) Ext	IG Mouse (Male) (Serum)	400.0 mg/kg	Active		L10141
Seed India	Androgenic Effect	H2O Ext	IG Rat (Male)	250.0 mg/kg	Active	Measured by changes in accessory reproductive organs. Weight of epididymis, prostate gland, seminal vesicle and levator ani increased.	J19694

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit United Arab Emirates	Hepatic Enzyme Modulating Activity	Juice	Oral Rat (streptozotocin-induced diabetes)		Active	Reversed 50-100% increase in aniline hydroxylase and ethoxyresorufin-O-deethylase activity. Reversed the 17-20% decreased activity of aminopyrene N-demethylase and ethoxycoumarin-O-deethylase. Normalized a reduced cytosolic glutathione concentration. Increased (20-30%) GST activity.	AM1023
Fruit Juice Sri Lanka	Gamma-glutamyl Transferase Induction	Fruit Juice(unripe)	IG Rat (Male)	10.0 ml/kg	Active	Results significant at p <0.001 level.	K17959
Fruit Juice Sri Lanka	Gamma-glutamyl Transferase Induction	Not stated	IG Rat (Male)	10.0 ml/kg	Active	Results significant at p <0.001 level.	K17959
Fruit India	Cytochrome B-5 Increase	H2O Ext	External Mouse	100.0 mcl	Active		J14866
Fruit India	Cytochrome B-5 Increase	H2O Ext	IG Mouse (Liver)	100.0 mcl	Active	Activity was passed translactationally to pups of dams treated with extract for 14 days.	J16660
Seed India	Cytochrome B-5 Increase	H2O Ext	External Mouse	100.0 mcl	Active		J14866
Fruit Pulp India	Cytochrome B-5 Increase	H2O Ext	External Mouse	100.0 mcl	Inactive		J14866
Fruit Pulp India	Cytochrome B-5 Increase	H2O Ext	IG Mouse (Female) (Liver)	100.0 mcl	Inactive		J16660
Fruit Peel India	Cytochrome B-5 Increase	H2O Ext	External Mouse	100.0 mcl	Active		J14866
Fruit Peel India	Cytochrome B-5 Increase	H2O Ext	IG Mouse (Female)	100.0 mcl	Active	Liver activity was passed translactationally to pups of dams treated with extract for 14 days.	J16660
Seed India	Cytochrome B-5 Increase	H2O Ext	IG Mouse (Female) (Liver)	100.0 mcl	Active		J16660

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Peel India	Cytochrome P450 Induction	H2O Ext	IG Mouse (Female)	100.0 mcg	Active	Liver activity was passed translactationally to pups of dams treated with extract for 14 days.	J16660
Seed India	Cytochrome P450 Induction	H2O Ext	IG Mouse (Female) (Liver)	100.0 mcl	Active		J16660
Fruit Pulp India	Cytochrome P450 Induction	H2O Ext	IG Mouse (Female) (Liver)	100.0 mcl	Inactive		J16660
Fruit India	Cytochrome P450 Induction	H2O Ext	IG Mouse (Female)	100.0 mcl	Active	Liver activity was passed translactationally to pups of dams treated with extract for 14 days.	J16660
Fruit China	Cytochrome P450 Inhibition	Fruit	Oral Mouse	15.0 % of diet	Inactive	Microsomes-rat-liver.	J18457
Fruit Thailand	Cytochrome P450 Inhibition	Fruit	Oral Rat (Male)	12.5 % of diet	Inactive	Microsomes-rat-liver.	J18457
Fruit Peel India	Sulfhydryl-containing Compounds Increased	H2O Ext	IG Mouse (Female)	100.0 mcl	Active	Liver activity was passed translactationally to pups of dams treated with extract for 14 days.	J16660
Fruit India Pulp India Fruit Peel India	Sulfhydryl-containing Compounds Increased	H2O Ext	External Mouse	100.0 mcl	Active	vs. DMBA initiated and croton oil: promoted sulfhydryl depletion.	J14866
Seed India	Sulfhydryl-containing Compounds Increased	H2O Ext	IG Mouse (Female) (Liver)	100.0 mcl	Active		J16660
Fruit Pulp India	Sulfhydryl-containing Compounds Increased	H2O Ext	IG Mouse (Female) (Liver)	100.0 mcl	Inactive		J16660
Fruit India	Sulfhydryl-containing Compounds Increased	H2O Ext	IG Mouse (Female)	100.0 mcl	Active	Liver activity was passed translactationally to pups of dams treated with extract for 14 days.	J16660
Seed India	Glutathione-s-transferase Induction	H2O Ext	IG Mouse (Female) (Liver)	100.0 mcl	Active		J16660

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Peel India	Glutathione-s-trans-ferase Induction	H2O Ext	External Mouse	100.0 mcg	Active		J14866
Fruit Peel India	Glutathione-s-trans-ferase Induction	H2O Ext	IG Mouse (Male)	100.0 mcl	Active	Liver activity was passed translactationally to pups of dams treated with extract for 14 days.	J16660
Fruit Pulp India	Glutathione-s-trans-ferase Induction	H2O Ext	External Mouse	100.0 mcl	Inactive		J14866
Fruit Pulp India	Glutathione-s-trans-ferase Induction	H2O Ext	IG Mouse (Female) (Liver)	100.0 mcl	Inactive		J16660
Fruit India	Glutathione-s-trans-ferase Induction	ETOH(95%) Ext	External Mouse	10.0 mcl	Active		J14866
Seed India	Glutathione-s-trans-ferase Induction	H2O Ext	External Mouse	100.0 mcl	Active		J14866
Fruit Thailand	Glutathione-s-trans-ferase Induction	Fruit	Oral Rat (Male)	12.5 % of diet	Active	Microsomes-rat-liver.	J18457
Fruit India	Glutathione-s-trans-ferase Induction	H2O Ext	IG Mouse (Female)	100.0 mcl	Active	Liver activity was passed translactationally to pups of dams treated with extract for 14 days.	J16660
Fruit USA-FL	Guanylate Cyclase Inhibition	H2O Ext	Rat (colon) Rat (heart) Rat (kidney) Rat (liver) Rat (lung) Rat (stomach)	Not stated	Strong Activity		M00425
Seed USA-FL	Guanylate Cyclase Inhibition	H2O Ext	Rat (liver)	Not stated	Inactive		M00425
Fruit USA	Guanylate cyclase Modulation	Aqueous Ext	Rat (prostate)	Not stated	Active	Guanylate cyclase activity was greater in tumor than normal prostate tissue and was reduced by the extract.	AM1041
Fruit India	Catalase Inhibition	ETOH(100%) Ext	IG Mouse (Male) (Heart)	400.0 mg/kg	Active		L10141

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Superoxide Dismutase Inhibition	ETOH(100%) Ext	IG Mouse (Male) (Heart)	400.0 mg/kg	Active		L10141
Fruit China	Aminopyrine--de-methylase Inhibition	Fruit	Oral Rat (Male)	15.0 % of diet	Inactive	Microsomes-rat-liver.	J18457
Fruit Thailand	Aminopyrine--de-methylase Inhibition	Fruit	Oral Rat (Male)	12.5 % of diet	Inactive	Microsomes-rat-liver.	J18457
Fruit Thailand	Aniline Hydroxylase Inhibition	Fruit	Oral Rat (Male)	12.5 % of diet	Inactive	Microsomes-rat-liver.	J18457
Fruit China	Aniline Hydroxylase Inhibition	Fruit	Oral Rat (Male)	15.0 % of diet	Inactive	Microsomes-rat-liver.	J18457
Seed Japan	Alpha-glucosidase Inhibitory Activity	MEOH Ext	Rat(small intestine)	Not stated	Active		AM1002
Fruit China	Benzopyrene Metabolism Inhibition	Fruit	Oral Rat (Male)	15.0 % of diet	Inactive	Microsomes-rat-liver s-9 fractions from animals fed fruit inhibited benzo[a]pyrene-induced mutagenicity towards <i>salmonella typhimurium</i> .	J18457
Fruit Thailand	Benzopyrene Metabolism Inhibition	Fruit	Oral Rat (Male)	12.5 % of diet	Active	Microsomes-rat-liver s-9 fractions from animals fed fruit inhibited benzo[a]pyrene-induced mutagenicity towards <i>salmonella typhimurium</i> .	J18457
Fruit China	Aflatoxin Inactivation	Fruit	Oral Rat (Male)	15.0 % of diet	Inactive	Microsomes-rat-liver s-9 fractions from animals fed fruit inhibited aflatoxin-b-1-induced mutagenicity towards <i>salmonella typhimurium</i> .	J18457
Fruit Thailand	Aflatoxin Inactivation	Fruit	Oral Rat (Male)	12.5 % of diet	Active	S-9 fractions from animals fed fruit inhibited aflatoxin-b-1- induced mutagenicity towards <i>salmonella typhimurium</i> .	J18457
Fruit China	Glutathione-s-transferase Induction	Fruit	Oral Rat (Male)	15.0 % of diet	Inactive	Microsomes-rat-liver.	J18457

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit + Leaf Philippines	Anticlastogenic Activity	Juice	IP Mouse (cells-marrow)	50.0 ml/kg	Active	vs. mitomycin c-, tetracycline- and dimethylnitrosamine-induced micronuclei.	K17561
Seed China	Androgenic Effect	Not stated	Not stated	Not stated	Active		M27078
Fruit China	Adenyl Cyclase Inhibition	Not stated	Cell Culture	Not stated	Inactive		T08662
Fruit Not Stated	Guanylate Cyclase Inhibition	H2O Ext	Cell Culture	ED50=0.3 mg/ml	Active	Lymphoblasts-human.	T01575
Fruit USA	Guanylate Cyclase Inhibition	ETOH Ext	Not stated	ED50= 170.0 mcg/ml	Active	Leukemic lymphocytes.	T12861
Fruit China	Guanylate Cyclase Inhibition	Not stated	Cell Culture	Not stated	Active		T08662
Seed Japan	Hemagglutinin Activity	Buffer	Not stated	Not stated	Active		M25317
Fruit Thailand	Chondrogenesis Inhibition	MEOH Ext	Cell Culture (Raji)	200.0 mcg/ml	Weak Activity	vs. 12-o-tetradecanoylphorbol-13- ace-tate(tpa)-induced epstein-barr virus early antigen activation.	L12243
Fruit Thailand	Antimicrobial Activity (unspecified)	Hot H2O Ext	Agar Plate	Not stated	Active		P00050
Fruit Japan	Antibacterial Activity	MEOH Ext	Agar Plate	MIC=1.0 gm/ml	Weak Activity	<i>Escherichia coli</i>	L07607
Fruit China	Antibacterial Activity	Not stated	Agar Plate	MIC=1100 mg/ml	Inactive		L19726
Fruit India	Antibacterial Activity	H2O Ext H2O Ext H2O Ext Pet Ether Ext Pet Ether Ext Pet Ether Ext	Agar Plate Agar Plate Agar Plate Agar Plate Agar Plate Agar Plate	250.0 mg/ml 250.0 mg/ml 250.0 mg/ml 250.0 mg/ml 250.0 mg/ml 250.0 mg/ml	Active Active Active Active Active Active	<i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Pseudomonas aeruginosa</i> <i>Bacillus subtilis</i> <i>Pseudomonas aeruginosa</i> <i>Staphylococcus aureus</i>	K19538
Fruit India	Antibacterial Activity	H2O Ext Pet Ether Ext	Agar Plate Agar Plate	250.0 mg/ml 250.0 mg/ml	Inactive Inactive	<i>Staphylococcus aureus</i> <i>Escherichia coli</i>	K19538

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Antibacterial Activity	CHCL ₃ Ext ETOH(95%) Ext H ₂ O Ext	Agar Plate	250.0 mg/ml	Active	Bacillus subtilis Escherichia coli Pseudomonas aeruginosa Staphylococcus aureus	K19538
Fruit India	Antibacterial Activity	ETOH-H ₂ O (1:1) Ext	Broth Culture	1.0 mg/ml	Inactive	Pseudomonas aeruginosa	K19538
Fruit Turkey	Antibacterial Activity	Not stated	Agar plate	MIC=1.95 and 250 mcg/ml	Active	<i>Helicobacter pylori</i> (one standard strain and 8 clinical isolates).	AM1018
Fruit Papua- New Guinea	Antibacterial Activity	H ₂ O Ext	Agar Plate	5.0 mcl	Weak Activity	<i>Bacillus cereus</i> <i>Bacillus subtilis</i> <i>Micrococcus luteus</i> <i>Micrococcus roseus</i> <i>Proteus mirabilis</i> <i>Pseudomonas aeruginosa</i> <i>Serratia marcescens</i> <i>Streptococcus faecalis</i> <i>Trichomonas vaginalis</i>	J19353
Fruit Papua- New Guinea	Antibacterial Activity	H ₂ O Ext	Agar Plate	5.0 mcl	Active	<i>Proteus mirabilis</i> <i>Escherichia coli</i> <i>Micrococcus roseus</i> <i>Salmonella typhi</i> <i>Staphylococcus albus</i> <i>Staphylococcus aureus</i> <i>Staphylococcus epidermidis</i>	J19353
Fruit Papua- New Guinea	Antibacterial Activity	H ₂ O Ext	Agar Plate	5.0 mcl	Inactive	<i>Bacillus cereus</i> <i>Escherichia coli</i> <i>Micrococcus luteus</i> <i>Pseudomonas aeruginosa</i> <i>Salmonella typhi</i> <i>Serratia marcescens</i> <i>Staphylococcus albus</i> <i>Staphylococcus aureus</i> <i>Staphylococcus epidermidis</i> <i>Trichomonas vaginalis</i> <i>Salmonella typhimurium</i>	J19353

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit Thailand	Antibacterial Activity	MEOH Ext CHCL3 Ext Ether Ext H2O Ext	Agar Plate	MIC=<50.0 mg	Strong Activity	<i>Bacillus subtilis</i> <i>Staphylococcus aureus</i>	P00093
Seed China	Antibacterial Activity	Not stated	Agar Plate	MIC=75.0 mg/ml	Equiv		L19726
Thailand	Antibacterial Activity	CHCL3 Ext Ether Ext H2O Ext MEOH Ext Ether Ext	Agar Plate	Not stated	Active	<i>Escherichia coli</i> <i>Pseudomonas aeruginosa</i> <i>Salmonella typhosa</i> <i>Sarcina lutea</i> <i>Shigella dysenteriae</i>	P00093
Fruit Thailand	Antibacterial Activity	Pet Ether Ext	Agar Plate	Not stated	Inactive	<i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Pseudomonas aeruginosa</i> <i>Salmonella typhosa</i> <i>Sarcina lutea</i> <i>Shigella dysenteriae</i> <i>Staphylococcus aureus</i>	P00093
Seed India	Antibacterial Activity	ETOH(95%) Ext H2O Ext	Agar Plate	10.0 mg/ml	Inactive	<i>Corynebacterium diphtheriae</i> <i>Diplococcus pneumoniae</i> <i>Staphylococcus aureus</i> <i>Streptococcus pyogenes</i> <i>Streptococcus viridans</i>	M29966
Seed India	Antibacterial Activity	Seeds	Agar Plate	Not stated	Active	<i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Pseudomonas cichorii</i> <i>Salmonella typhimurium</i>	L07721
Root Pakistan	Antibacterial Activity	ETOH(95%) Ext	Agar Plate	Not stated	Active	<i>Bacillus subtilis</i> <i>Escherichia coli</i> <i>Staphylococcus aureus</i> <i>Vibrio cholera</i>	L11725
Fruit Thailand	Antimycobacterial Activity	CHCL3 Ext H2O Ext MEOH Ext Pet Ether Ext Ether Ext	Agar Plate Agar Plate Agar Plate Agar Plate Agar Plate	Not stated Not stated Not stated Not stated MIC=2.0 mg	Active Active Active Active Inactive Strong Activity	<i>Mycobacterium smegmatis</i> <i>Mycobacterium smegmatis</i> <i>Mycobacterium smegmatis</i> <i>Mycobacterium smegmatis</i> <i>Mycobacterium smegmatis</i>	P00093

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Fruit India	Antifungal Activity	ETOH-H2O (1:1) Ext	Broth Culture	1.0 mg/ml	Inactive	<i>Aspergillus fumigatus</i> <i>Trichophyton mentagrophytes</i>	K09153
Seed India	Antifungal Activity	ETOH(95%) Ext H2O Ext	Agar Plate	10.0 mg/ml	Inactive	<i>Microsporum canis</i> <i>Microsporum gypseum</i> <i>Phialophora jeanselmei</i> <i>Piedraia hortae</i> <i>Trichophyton mentagrophytes</i>	M29966
Seed India	Antiyeast Activity	ETOH(95%) Ext H2O Ext	Agar Plate	10.0 mg/ml	Inactive	<i>Candida albicans</i> <i>Candida tropicalis</i> <i>Candida albicans</i> <i>Candida tropicalis</i>	M29966
Fruit India	Antiyeast Activity	ETOH-H2O Ext	Broth Culture	1.0 mg/ml	Inactive	<i>Candida albicans</i> <i>Cryptococcus neoformans</i> <i>Sporotrichum schenckii</i>	K09153
Fruit Thailand	Antiyeast Activity	CHCL3 Ext Ether Ext MEOH Ext Pet Ether Ext H2O Ext	Agar Plate Agar Plate Agar Plate Agar Plate Agar Plate	Not stated Not stated Not stated Not stated MIC=25 mg	Active Active Active Inactive Strong Activity	<i>Candida albicans</i> <i>Candida albicans</i> <i>Candida albicans</i> <i>Candida albicans</i> <i>Candida albicans</i>	P00093
Fruit India	Antiviral Activity	ETOH-H2O Ext	Cell Culture	0.05 mg/ml	Inactive	<i>Virus-ranikhet</i> <i>Virus-vaccinia</i>	K09153
Fruit India	Antiviral Activity	Not stated	Not stated	Not stated	Active	<i>Virus - herpes simplex 1</i> <i>Virus - HIV-1</i>	J11478
Fruit + Seed Not Stated	Antiviral Activity	Not stated	Not stated	Not stated	Active		AM1033
Fruit India	Anthelmintic Activity	ETOH(95%) Ext	Not stated	100.0 mg/ml	Active	<i>Ascaridia galli</i>	K03520
Fruit Juice India	Anthelmintic Activity	ETOH(95%) Ext	Not stated	0.1 ml	Active	<i>Ascaridia galli</i>	K03520
Seed India	Anthelmintic Activity	Hot H2O Ext	Not stated	1-50	Active	<i>Haemonchus contortus</i>	W00384
Fruit India	Antiprotozoan Activity	ETOH-H2O (1:1) Ext	Broth Culture	IC100= 25.0 mcg/ml	Active	<i>Entamoeba histolytica</i>	K09153
Fruit Brazil	Molluscicidal Activity	ETOH(95%) Ext H2O Ext	Not stated Not stated	1000 ppm 1000 ppm	Weak Activity	<i>Biomphalaria glabrata</i> <i>Biomphalaria straminea</i>	W02949

Part -Origin	Activity Tested For	Type Extract	Test Model	Dosage	Result	Notes/Organism tested	Ref #
Meristem Brazil	Insecticide Activity	ETOH(95%) Ext	Not stated	50.0 mcg	Inactive	<i>Rhodnius neglectus</i>	K18765
Fruit Thailand	Insecticide Activity	ETOAC Ext MEOH Ext Pet Ether Ext	Not stated Not stated Not stated	Not stated Not stated 1.0 ppm	Inactive Inactive Active	<i>Spodoptera litura larvae</i> <i>Spodoptera litura larvae</i> <i>Spodoptera litura larvae</i>	P00001
Seed Oil India	Feeding Deterrent(insect)	Seed Oil	Not stated	0.5%	Active	<i>Athalia promina</i>	T02572
Fruit India	Plant Root Growth Inhibition	Not stated	Not stated	Not stated	Active		J11478
Seed Oil India	Miscellaneous Effects	Seed Oil	Oral Rat	20.0 % of diet	Active		J18799

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