

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in Glycyrrhiza uralensis**

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1-METHOXY-FICIFOLINOL	Root	--	3.4		
0	18-ALPHA-GLYCYRRHETINIC-ACID	Root	--	--		
0	18-ALPHA-GLYCYRRHIZIN	Root	--	200		
0	18-ALPHA-HYDROXY-GLYCYRRHETATE	Rhizome	--	--		
0	18-BETA-GLYCYRRHETINIC-ACID	Root	--	--		
0	2',4',5-TRIHYDROXY-7-METHOXY-8-ALPHA-ALPHA-DIMETHYL-ALLYL-3-ARYLCOUMARIN	Root	--	--		
0	2',4',7-TRIHYDROXY-3'-GAMMA-GAMMA-DIMETHYL-ALLYL-3-ARYLCOUMARIN	Root	--	--		
0	2,3-DIHYDRO-ISOLIQUIRITIGENIN	Root	--	--		
0	2-METHYL-7-HYDROXYISOFLAVONE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	22-BETA-ACETYL-GLABRIC-ACID	Root	--	--		
0	24-HYDROXYGLABROLIDE	Root	--	--		
0	24-HYDROXYGLYCYRRHETIC-ACID-METHYL-ESTER	Root	--	--		
0	28-HYDROXYGLYCYRRHETIC-ACID	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-ACETYL-GLYCYRRHETIC-ACID	Root	--	--		
0	3-BETA-24-DIHYDROXY-OLEAN-11,13(18)-DIEN-30-OIC-ACID-METHYL-ESTER	Root	--	--		
0	3-BETA-FORMYLGLABROLIDE	Root	--	--		
0	3-O-METHYLGLYCYROL	Root	--	--		
0	3-OXO-GLYCYRRHETIC-ACID	Root	--	--		
0	4',7-DIHYDROXYFLAVONE	Root	--	240		
0	4'-O-(BETA-D-APIO-D-FURANOSYL-(1,2)-BETA-D-GLUCOPYRANOSYL)-LIQUIRITIGENIN	Root	--	120000		
0	5-O-METHYLGLYCYROL	Root	--	--		
0	6''-O-ACETYL-LIQUIRITIN	Root	--	--		
0	8-C-PRENYL-ERIODICTYOL	Root	--	13		
0	APIGENIN-6,8-DI-C-GLUCOSIDE	Root	--	--		
1	APIOGLYCYRRHIZIN	Root	--	100	-1	
0	APIOISOLIQURITIN	Root	--	--		
0	APIOLIQURITIN	Root	--	--		
1	ARABOGLYCYRRHIZIN	Root	--	600	1	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ARSENIC	Root	0.29	0.3	-0.19476716146558964	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
0	ASPARANIC-ACID	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
7	ASTRAGALIN	Leaf	--	16	-1	
47	BETA-SITOSTEROL	Root	--	--		
22	BETULINIC-ACID	Root	--	--		
28	CALCIUM	Root	6850	23500	1.7629333825366154	
0	CLYCOSIN	Sprout Seedling	--	0.5		
12	COPPER	Root	13	14	0.25236706334497194	
1	ECHINATIN	Sprout Seedling	--	--		
1	ECHINATIN	Root	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	ECHINATIN	Tissue Culture	--	--		
0	EO	Root	--	50	-0.6524371988344991	Isaev, V. 1932. Essential Oils of the Flora of Tadshikistan. Acta Hortii Bot Tadshikistan 1932: 17-.
16	FORMONONETIN	Sprout Seedling	--	25		
16	FORMONONETIN	Root	--	--		
16	FORMONONETIN	Shoot	--	3		
0	GANCAONIN-A	Shoot	--	37		
0	GANCAONIN-B	Shoot	--	20		
0	GANCAONIN-C	Shoot	--	3		
0	GANCAONIN-D	Shoot	--	0.3		
0	GANCAONIN-E	Shoot	--	8		
0	GANCAONIN-L	Shoot	--	7		
0	GANCAONIN-M	Shoot	--	6		
0	GANCAONIN-N	Shoot	--	1		
0	GANCAONIN-O	Shoot	--	5		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GANCAONIN-P	Shoot	--	6		
0	GANCAONIN-P3'-METHYL-ETHER	Root	--	1		
0	GANCAONIN-Q	Shoot	--	1.5		
0	GANCAONIN-R	Shoot	--	14		
0	GANCAONIN-S	Shoot	--	3		
0	GANCAONIN-T	Shoot	--	1		
0	GANCAONIN-U	Shoot	--	12		
0	GANCAONIN-V	Shoot	--	--		
0	GLABRIC-ACID	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	GLABROLIDE	Root	--	--		
7	GLUCOSE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
4	GLUCURONIC-ACID	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	GLYASPERIN-D	Root	--	0.4		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	GLYCYCOUMARIN	Root	1600	1750	1	
5	GLYCYCOUMARIN	Rhizome	10	1380		
0	GLYCYRIN	Root	--	400		
0	GLYCYROL	Rhizome	--	440		
0	GLYCYROL	Root Bark	--	--		
0	GLYCYROL	Root	--	800	1	
29	GLYCYRRHETIC-ACID	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	GLYCYRRHETIC-ACID-METHYL-ESTER	Root	--	--		
32	GLYCYRRHETINIC-ACID	Root	--	--		
0	GLYCYRRHIZA-PECTIC-POLYSACCHARIDE	Root	--	--		
0	GLYCYRRHIZA-PECTIN	Root	--	--		
0	GLYCYRRHIZA-URALENSIS-GLUCAN-6	Root	--	--		
57	GLYCYRRHIZIN	Rhizome	2000	81670	1.3590702651662159	
57	GLYCYRRHIZIN	Root	11200	84000	-0.541917250519363	
57	GLYCYRRHIZIN	Plant	--	--		
57	GLYCYRRHIZIN	Stem	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
57	GLYCYRRHIZIN	Leaf	--	--		
0	GLYURANOLIDE	Rhizome	--	--		
6	IRON	Root	180	280	-0.03487186873025288	
2	ISOBAVACHALCONE	Sprout Seedling	--	0.8		
0	ISOGLYCYCOUMARIN	Rhizome	--	180		
0	ISOGLYCYROL	Rhizome	--	270	1	
0	ISOGLYCYROL	Root Bark	--	--		
0	ISOGLYCYROL	Root	--	200		
2	ISOLICOFLAVONOL	Rhizome	--	10		
28	ISOLIQUIRITIGENIN	Root	100	1050	-1	
28	ISOLIQUIRITIGENIN	Rhizome	60	20000	1	
28	ISOLIQUIRITIGENIN	Sprout Seedling	--	--		
6	ISOLIQUIRITIN	Root	120	4000	1	
6	ISOLIQUIRITIN	Rhizome	800	23280	1	
0	ISOLIQUIRITIN-APIOSIDE	Root	20	1650		
22	ISOQUERCITRIN	Leaf	--	21	-0.4483403259065055	
0	KANZONOL-F	Root	--	2		
0	KANZONOL-G	Root	--	4		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	KANZONOL-H	Root	--	1		
0	KANZONOL-I	Root	--	4		
0	KANZONOL-J	Root	--	2		
0	KANZONOL-K	Rhizome	--	0.04		
0	KANZONOL-L	Rhizome	--	0.1		
0	KANZONOL-M	Root	--	0.6		
0	KANZONOL-N	Root	--	0.4		
0	KANZONOL-O	Root	--	0.4		
0	KANZONOL-P	Root	--	0.8		
0	KUMATAKENIN	Root	--	--		
2	LICOBENZOFURAN	Root	--	--		
28	LICOCHALCONE-A	Rhizome	--	--		
28	LICOCHALCONE-A	Root	--	--		
2	LICOCHALCONE-B	Root	--	--		
4	LICOCOUMARONE	Rhizome	19	400		
4	LICOCOUMARONE	Root	--	900		
0	LICOFLAVONE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LICOFLAVONE-A	Root	--	--		
0	LICOFLAVONOL	Root	--	--		
4	LICOISOFLAVONE-A	Root	--	--		
0	LICONEOLIGNAN	Root	--	15		
7	LICOPYRANOCOUMARIN	Root	--	500		
0	LICORICE-SAPONIN-A-3	Rhizome	--	290		
0	LICORICE-SAPONIN-A-3	Root	5.8	1000		
0	LICORICE-SAPONIN-B-2	Root	--	0.8		
0	LICORICE-SAPONIN-B-2	Rhizome	--	40		
0	LICORICE-SAPONIN-C-2	Rhizome	--	50		
0	LICORICE-SAPONIN-C-2	Root	--	1		
0	LICORICE-SAPONIN-D-3	Rhizome	--	70		
0	LICORICE-SAPONIN-D-3	Root	--	1		
0	LICORICE-SAPONIN-E-2	Rhizome	--	120		
0	LICORICE-SAPONIN-E-2	Root	2.4	700		
0	LICORICE-SAPONIN-F-3	Root	--	0.4		
0	LICORICE-SAPONIN-G-2	Root	0.6	1000		
0	LICORICE-SAPONIN-H-2	Root	1.4	2100		
0	LICORICE-SAPONIN-J-2	Root	--	0.4		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LICORICE-SAPONIN-K-2	Root	--	0.4		
0	LICORICE-SAPONIN-L-3	Root	--	300		
1	LICORICIDIN	Root	--	11		
0	LICORICONE	Root Bark	--	--		
0	LICORICONE	Root	--	--		
0	LICORIDIN	Root	--	--		
0	LICORINONE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	LICORISOFLAVAN-A	Root	--	16		
0	LICRASIDE	Root	--	600		
12	LIQUIRITIGENIN	Root	--	70000	1	
12	LIQUIRITIGENIN	Rhizome	30	1210		
12	LIQUIRITIGENIN	Sprout Seedling	--	--		
0	LIQUIRITIGENIN-4',7-DIGLUCOSIDE	Root	--	20		
0	LIQUIRITIGENIN-4'-APIOSYL-(1,2)-GLUCOSIDE	Root	--	--		
3	LIQUIRITIN	Rhizome	7900	36490	1	
3	LIQUIRITIN	Root	120	300000	1	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LIQUIRITIN-APIOSIDE	Root	120	9000		
0	LUPIWIGHTEONE	Shoot	--	6		
65	MAGNESIUM	Root	3690	5070	1.3347601821303892	
14	MANGANESE	Root	13	26	-0.23540916682251556	
18	MANNITOL	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
2	N-HEXACOSANE	Root	--	--		
0	NARCISSIN	Leaf	--	16		
56	NARINGENIN	Root	--	--		
0	NEOGLYCYROL	Root	--	--		
1	NEOSOLIQIRITIN	Root	--	200		
1	NEOLIQIRITIN	Root	--	--		
0	NICOTIFLORIN	Leaf	--	32	-1	
0	ONOCERIN	Root	--	--		
2	ONONIN	Root	200	6000	1.413063343101065	
13	P-HYDROXY-BENZOIC-ACID	Sprout Seedling	--	0.5		
14	POTASSIUM	Root	2500	3140	-0.9254550611631442	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PYRANOCOUMARIN	Root	--	--		
176	QUERCETIN	Leaf	--	7	-0.3519175096210679	
1	QUERCETIN-3,3'-DIMETHYLETHER	Leaf	--	48		
87	RUTIN	Leaf	--	53	-1.0012547705959014	
5	SAPONINS	Root	60000	140000	1.7378627114836418	Chemical Constituents of Oriental Herbs (3 diff. books)
44	SCOPOLETIN	Shoot	--	2		
1	SIGMOIDIN-B	Shoot	--	7		
1	SODIUM	Root	323	1340	0.11115161273729743	
14	SUCROSE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	URALENE	Leaf	--	26		
0	URALENIC-ACID	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
77	ZINC	Root	11	13	-0.489576115410352	