

Suppl. Table S1. 378 hits by searching "flav" in the NPASS database.

Natural Product ID	Natural Product Name	Formula	Molecular Weight	# Source Organism	# Target	# Activity Record
		C32H22O1				
NPC100049	7,7''-Di-O-Methylamentoflavone	0	566.12	1	2	2
NPC100263	6,4'-Dimethoxy-7,2'-Dihydroxyisoflavone	C17H14O6	314.08	1	7	7
	(2S)-4',5,7-Trihydroxyflavan-(4Beta->8)-					
NPC100482	Epiafzelechin	C30H26O9	530.16	2	2	2
NPC101366	2'-O-Methylabronisoflavone	C17H14O5	298.08	2	1	2
NPC102540	(2S)-2',4'-Dihydroxy-7-Methoxy-8-Prenylflavan	C21H24O5	356.16	2	2	2
NPC102904	(2S)-6,4'-Dihydroxy-7,3'-Dimethoxyflavan	C17H18O5	302.12	1	3	3
NPC103904	Hydroxy-3,7-Dimethoxyflavone	C17H14O5	298.08	97	4	7
NPC103976	(2S)-4'-Hydroxy-6,7,3'-Trimethoxyflavan	C18H20O5	316.13	1	2	2
	(2S,3S)-2,3-Trans-5,7-Dihydroxy-6,8-					
NPC105136	Dimethyldihydroflavonol	C17H16O5	300.1	1	1	2
NPC106914	(2S)-4,7-Dihydroxy-8-Methylflavan	C16H16O3	256.11	3	1	1
NPC107551	(2S)-6,3',4'-Trihydroxy-7-Methoxyflavan	C16H16O5	288.1	1	4	4
NPC107572	Sophoraflavanone B	C20H20O5	340.13	12	28	36
NPC107586	(2S)-5,7,2'-Trihydroxyflavanone	C15H12O5	272.07	1	3	7
		C30H20O1				
NPC107627	Pancibiflavonol	2	572.1	1	2	8
NPC1089	(S)-5,7-Dihydroxy-6-Prenylflavanone	C20H20O4	324.14	31	1	1
	2(S)-5'-(1'',1''-Dimethylallyl)-8-(3'',3''-					
NPC10990	Dimethylallyl)-2',4',5,7-Tetrahydroxyflavanone	C25H28O6	424.19	11	1	1
NPC11060	(2S)-3',4'-Dihydroxy-5,7-Dimethoxyflavan	C17H18O5	302.12	1	4	4
NPC110639	5,7,8,3',4'-Pentamethoxyflavone	C20H20O7	372.12	69	3	3
		C30H18O1				
NPC111112	Robustaflavone	0	538.09	21	16	39
NPC112246	(2S)-4'-Hydroxy-7,3'-Dimethoxyflavan	C17H18O4	286.12	1	3	3
		C43H32O2				
NPC112380	Theaflavin Digallate	0	868.15	1	3	7
NPC112939	(2S)-8,5'-Dihydroxy-7,3',4'-Trimethoxyflavan	C18H20O6	332.13	1	7	8
		C30H18O1				
NPC112954	Ochnaflavone	0	538.09	15	5	14
NPC113089	7,3',4'-Trimethoxyflavone	C18H16O5	312.1	1	2	2

NPC114652	Kurziflavolactone B (2S)-7-Methoxy-8-(3-Methoxy-3-Methylbut-1-	C32H30O7	526.2	1	1	1
NPC11566	Enyl)Flavanone	C22H24O4	352.17	1	1	3
NPC115798	5,7-Dihydroxy-3,3',4',6-Tetramethoxyflavone	C19H18O8	374.1	65	7	10
NPC118726	6,7,3',4'-Tetrahydroxyflavone	C15H10O6	286.05	24	1	1
NPC118813	4',5,7-Trihydroxy Homoisoflavanone (2S)-6-(Gamma,Gamma-Dimethylallyl)-5,4'- Dihydroxy-3'-Methoxy-6",6"-	C16H14O5	286.08	2	11	12
NPC119209	Dimethylpyran[2",3":7,8]Flavanone	C26H28O6 C40H32O1	436.19	8	3	4
NPC121647	Mucisoflavone B	0 C32H22O1	672.2	2	1	2
NPC121649	Podocarpusflavone B	0 C28H30O1	566.12	27	2	3
NPC121703	Oxytroflavoside D	5	606.16	40	1	1
NPC121812	(2S)-8-Hydroxy-7,3',4',5'-Tetramethoxyflavan	C19H22O6	346.14	1	7	8
NPC122365	Abyssinoflavanone Vi	C22H20O5 C25H26O1	364.13	1	1	1
NPC122623	5,3'-Dipropanoyloxy-3,6,7,4'-Tetramethoxyflavone	0	486.15	1	5	5
NPC12296	(2S)-2',5,6',7-Tetrahydroxyflavanone	C15H12O6	288.06	1	1	1
NPC123886	5,7,3',5'-Tetrahydroxy-3,4'-Dimethoxyflavone	C17H14O8	346.07	1	1	1
NPC124467	5,6,8,3',6'-Pentamethoxy Flavone (2S)-5,7-Dimethoxy-8-(2S-Hydroxy-3-Methyl-3-	C20H20O7	372.12	1	1	1
NPC124780	Butenyl)-Flavanone	C22H24O5	368.16	1	2	2
NPC125449	4',7,8-Trihydroxyisoflavone	C15H10O5	270.05	26	7	17
NPC125855	Macarangaf flavanone B	C25H28O5	408.19	2	2	2
NPC125894	Exiguaflavone B (2S)-5,7-Dimethoxy-8-(2S-Hydroxy-3-Methyl-3-	C26H30O6	438.2	2	1	1
NPC125991	Butenyl)-3',4'-Methylenedioxyflavanone	C23H24O7 C28H24O1	412.15	1	1	1
NPC129264	Rugosaflavonoid C	3	568.12	1	5	5
NPC129853	5,7-Dihydroxy-4'-Methoxyhomoisoflavanon	C17H16O5	300.1	1	5	6
NPC130015	3'-Methoxy-[2",3":7,8]-Furanoflavone	C18H12O4	292.07	3	1	1
NPC130955	5,3'-Dihydroxy-4'-Methoxy-7-Carbomethoxyflavonol	C18H14O8	358.07	5	1	2
NPC131799	Flavoglaucin	C19H28O3 C20H11N3	304.2	1	9	10
NPC132329	Arcyriaflavin C	O4	357.07	3	2	2
NPC133392	5,7,3',4'-Tetrahydroxy-3-Methoxy-6-Geranylflavone	C26H28O7	452.18	1	1	1
NPC13408	5,7,2',4'-Tetrahydroxy-3-Geranylflavone	C25H26O6	422.17	1	1	1

NPC134195	(2R)-4'-Hydroxy-7-Methoxy-8-Methylflavan	C17H18O3	270.13	1	1	1
NPC136278	7,8,3',4',5'-Pentamethoxyflavone	C20H20O7	372.12	1	7	7
NPC136840	4',7-Dihydroxy-3-Methoxyflavone	C16H12O5	284.07	17	2	2
	(2S)-5,7,5'-Trihydroxyflavanone 2'-O-Beta-D-3,6-Di-					
	O-Acetylglucopyranosyl-(1->3)-Alpha-L-2-	C33H38O1				
NPC137871	Oacetylramnopyanoside	8	722.21	1	4	4
		C30H18O1				
NPC138299	Amentoflavone	0	538.09	120	78	116
		C34H40O1				
NPC138990	Oxytroflavoside B	9	752.22	40	1	1
NPC139293	3',7,8-Trihydroxy-4'-Methoxyisoflavone	C16H12O6	300.06	1	1	1
		C34H42O1				
NPC142142	Oxytroflavoside G	9	754.23	40	1	1
NPC145467	Licorisoflavan A	C27H32O6	452.22	2	2	5
NPC148011	(2R,3R)-3,7-Dihydroxyflavanone	C15H12O4	256.07	5	5	7
	5,7-Dihydroxy-3-Methoxy-6-C-Methylflavone 8,4'-	C29H34O1				
NPC148710	Di-O-Beta-D-Glucopyranoside	7	654.18	1	5	9
NPC149796	4'-Hydroxy-7,8-(2'',2''-Dimethylpyran)Flavan	C20H20O3	308.14	1	1	1
NPC156953	7,2'-Dihydroxy-4',5'-Dimethoxyisoflavone	C17H14O6	314.08	4	1	3
NPC157855	2'',2''-Dimethylchromene-[5'',6'':7,8]-Flavone	C20H16O3	304.11	5	2	2
		C33H24O1				
NPC158027	Heveaflavone	0	580.14	20	2	2
		C27H33N9				
NPC158055	Flavin Adenine Dinucleotide	O15P2	785.16	3	6	7
	5,7,4'-Trihydroxy-3',5'-Bis(3-Methyl-2-Buten-1-Yl)-					
NPC158874	3-Methoxyflavone	C26H28O6	436.19	1	1	1
	(2S)-5,7-Dihydroxy-4'-Methoxy-8,3-					
NPC161506	Diprenylflavanone	C26H30O5	422.21	1	1	1
NPC162680	4'-Hydroxy-5,7-Dimethoxyisoflavone	C17H14O5	298.08	4	1	1
NPC163780	5,8-Dihydroxy-3',4',6,7-Tetramethoxyflavone	C19H18O8	374.1	13	6	6
	5-Methoxy-(3'',4''-Dihydro-3'',4''-Diacetoxy)-2'',2''-					
NPC164299	Dimethylpyrano-(7,8:5'',6'')-Flavone	C25H24O8	452.15	1	1	1
NPC166036	Glisoflavone	C21H20O6	368.13	5	3	3
NPC166689	Cudraflavanone D	C25H28O6	424.19	1	4	6
NPC166934	Sophoraflavanone A	C25H28O5	408.19	4	3	8
NPC168085	Licoagroisoflavone	C20H16O5	336.1	4	2	2
	5,7,8,4'-Tetrahydroxy-3-Methoxy-6-Methylflavone 8-	C23H24O1				
NPC168584	O-Beta-D-Glucopyranoside	2	492.13	1	5	9
NPC168803	7,8-Dihydroxyflavone	C15H10O4	254.06	1	41	66

NPC168822	7-O-Beta-D-Glucopyranosyl-7,3',4'- Trihydroxyflavone	C21H20O1 0	432.11	1	7	10
NPC171985	Morelloflavone	C30H20O1 1	556.1	12	5	16
NPC172253	5,7,40-Trimethoxyflavan	C18H20O4	300.14	1	1	3
NPC172986	Licoflavone B	C25H26O4 C34H40O1	390.18	5	4	10
NPC175429	Oxytroflavoside C	9	752.22	40	1	1
NPC175504	(2S)-5-Hydroxy-7-Methoxy-8-[(E)-3-Oxo-1- Butenyl]Flavanone	C20H18O5	338.12	1	2	3
NPC176051	(2S)-3',4'-Dihydroxy-6,7-Dimethoxyflavan	C17H18O5	302.12	1	4	4
NPC17809	(2S)-4',5'-Dihydroxy-7-Methoxy-8-Methylflavan	C17H18O4	286.12	1	1	1
NPC179898	Flaviolin	C10H6O5	206.02	3	1	1
NPC181250	3,5,6,7,3',4',5'-Heptamethoxyflavone	C22H24O9	432.14	4	7	11
NPC182421	3',5,5',7-Tetrahydroxyflavanone	C15H12O6 C30H20O1	288.06	8	3	6
NPC182555	2,3-Dihydrorobustaflavone	0	540.11	3	4	17
NPC182852	(-)-(2S)-5,7,2'-Trihydroxy-8,3'-Diprenylflavanone	C25H28O5	408.19	5	1	2
NPC183851	(-)-(7''r,8''s)-4'',5,7-Trihydroxy-3',5'-Dimethoxy-4',8''- Oxyflavonolignan-7'',9''-Diol	C26H24O1 0	496.14	1	2	2
NPC183959	3',4',7-Trihydroxyflavaonone	C15H12O5 C35H32O1	272.07	8	1	1
NPC184485	Rel-Trigoflavidol A	0	612.2	1	6	11
NPC184755	5,3'-Dihydroxy-4'-Methoxy-2'',2''-Dimethylpyrano- (5'',6'',6,7)-Isoflavone	C21H18O6 C33H24O1	366.11	1	1	1
NPC186227	Kayaflavone	0	580.14	36	2	4
NPC188022	(2R)-7,4'-Dihydroxy-5-Methoxy-8-Methylflavan	C17H18O4	286.12	1	4	5
NPC188646	Flavokawain B	C17H16O4	284.1	38	90	119
NPC189179	3,5,3'-Trihydroxy-6,7,8,4'-Tetramethoxyflavone	C19H18O9	390.1	2	1	1
NPC189960	3,7,8-Trimethoxy-5-Hydroxyflavone	C18H16O6 C38H48O2	328.09	50	3	3
NPC192539	Aescuflavoside	5	904.25	1	5	9
NPC192587	Denticulaflavonol	C35H42O6	558.3	2	3	3
NPC192686	(2S)-6-(Gamma,Gamma-Dimethylallyl)-5-3'- Dihydroxy-4'-Methoxy- 6'',6''dimethylpyran[2'',3''7,8]Flavanone	C26H28O6	436.19	8	3	4
NPC193792	5,7-Dihydroxy-3',5'-Dihydroxyisoflavone	C15H10O6	286.05	1	5	5
NPC193805	2'-Hydroxyflavone	C15H10O3	238.06	13	1	1

		C31H20O1				
NPC194593	Sequoi flavone	0	552.11	8	2	5
NPC195022	[(3R)-6,4'-Dihydroxy-8-Methoxyhomoisoflavan	C17H18O4	286.12	1	4	5
NPC195919	6,7,3',4'-Tetramethoxyisoflavone	C19H18O6	342.11	5	3	3
		C30H18O1				
NPC196179	Hinokiflavone	0	538.09	14	7	13
NPC196439	3',5-Dihydroxy-4',6,7,8-Tetramethoxyflavone	C19H18O8	374.1	58	3	8
NPC19687	5,4'dihydroxy-3,6,7,8,3'-Pentamethoxyflavone	C20H20O9	404.11	51	8	10
NPC197351	(2S)-7,4'-Dihydroxy-3'-Prenylflavan	C20H22O3	310.16	2	1	1
NPC197425	5-Hydroxyflavone	C15H10O3	238.06	14	31	55
	(2S)-5,7,5'-Trihydroxyflavanone 2'-O-Beta-D-					
	Glucopyranosyl-(1->3)-Alpha-L-2-O-	C29H34O1				
NPC199079	Acetylramnopyanoside	6	638.18	1	4	4
	2Beta,3Beta-Epoxy-5,7,3',4'-Tetrahydroxyflavan-	C30H24O1				
NPC20050	(4Alpha->8)-Epicatechin	2	576.13	1	2	10
NPC200557	Flavanthridin	C16H16O4	272.1	11	4	12
NPC200694	Isolicoflavonol	C20H18O6	354.11	8	11	16
NPC201136	Sideritiflavone	C18H16O8	360.08	5	6	6
NPC201284	Isoflavone	C15H10O2	222.07	2	1	1
NPC201547	3,5,6,7,8,3',4'-Heptamethoxyflavone	C22H24O9	432.14	91	67	87
NPC203747	7,4'-Dihydroxy-3',5'-Dimethoxyisoflavone	C17H14O6	314.08	1	2	3
	(2S,3R,4R)-3,4',7-Trihydroxyflavon-(4Beta->8)-	C30H26O1				
NPC204770	Epicatechin	0	546.15	1	1	2
NPC204854	5,7,3'-Trihydroxy-3,6,8,4'-Tetramethoxyflavone	C19H18O9	390.1	49	2	3
		C32H22O1				
NPC205026	Robust flavone-7,4'-Dimethyl Ether	0	566.12	7	6	6
NPC205522	3',4',6,7,8-Pentamethoxyflavone	C20H20O7	372.12	104	2	2
NPC208176	(2S)-2',3,5,6',7-Pentahydroxyflavanone	C15H12O7	304.06	11	3	3
NPC208197	3',8-Dihydroxy-4',5',6,7-Tetramethoxyflavone	C19H18O8	374.1	13	6	6
	7-Hydroxy-4'-Methoxy-3'-(3-Hydroxy-3-Methyl-					
NPC209040	Trans-But-1-Enyl)-5'-(3-Methylbut-2-Enyl)Flavanone	C26H30O5	422.21	4	1	1
		C34H40O1				
NPC209550	Oxytroflavoside A	9	752.22	40	1	1
NPC210084	(2S)-7-Methoxy-4',6-Dihydroxyflavanone	C16H14O5	286.08	1	1	1
NPC210597	Echinoisoflavanone	C22H24O7	400.15	2	3	3
	(2S)-5,7,5'-Trihydroxyflavanone 2'-O-Beta-D-6-O-					
	Acetylglucopyranosyl-(1->3)-Alpha-L-2-O-	C31H36O1				
NPC210808	Acetylramnopyanoside	7	680.2	1	4	4

	(3R)-7,4'-Dihydroxy-5-Methoxy-6-Prenyl-6''',6'''-					
NPC211413	Dimethylpyrano[2''',3''':2',3']-Isoflavan	C26H30O5	422.21	3	2	4
NPC211466	3,5,7-Trihydroxy-4'-Methoxyflavanol	C16H14O6	302.08	18	4	4
NPC212767	3',5',7-Trihydroxyisoflavone	C15H10O5	270.05	1	6	7
		C32H22O1				
NPC215203	4',7''-O-Methylamentoflavone	0	566.12	1	5	8
NPC215311	Neobavaisoflavone	C20H18O4	322.12	5	7	24
NPC216538	Sophoflavescenol	C21H20O6	368.13	50	4	8
NPC216978	5,7,4'-Trihydroxy-8,3'-Diprenylflavone	C25H26O5	406.18	3	1	2
	5,7,3'-Trihydroxy-4',5'-(2''',2''''-Dimethylpyran)-8,2'-					
NPC218226	Di(3-Methyl-2-Butenyl)-(2S)-Flavanone	C30H34O6	490.24	2	5	5
NPC21835	(2R,3R)-3,3',5,5',7-Pentahydroxy Flavanonol	C15H12O7	304.06	4	2	2
NPC218490	4',6,7,Trihydroxyisoflavone	C15H10O5	270.05	2	13	22
NPC219330	3,5,7-Trihydroxy-3',4',5'-Trimethoxyflavone	C18H16O8	360.08	1	8	13
NPC219915	Dihydrocudraflavone B	C25H26O6	422.17	1	1	1
		C30H20O1				
NPC219927	2'',3''-Dihydroochnaflavone	0	540.11	2	1	1
NPC220998	Munduleaflavanone B	C21H22O5	354.15	24	2	7
		C30H18O1				
NPC222713	Cupressuflavone	0	538.09	39	9	10
NPC223500	Cudraflavanone B	C20H20O6	356.13	2	7	9
NPC223812	Sophoraflavanone G	C25H28O6	424.19	56	6	11
NPC224137	3,5-Dihydroxy-6,7,8,3',4'-Pentamethoxyflavone	C20H20O9	404.11	2	1	1
NPC22467	(2S)-5,7-Dimethoxy-8-Formylflavanone	C18H16O5	312.1	2	2	2
NPC226025	6-Geranyl-5,7-Dihydroxy-3',4'-Dimethoxyflavanone	C27H32O6	452.22	1	1	1
		C19H21NO				
NPC226428	Flavinantine	4	327.15	1	2	6
NPC226973	4'-Hydroxy-5,6,7,8-Tetramethoxyflavone	C19H18O7	358.11	50	2	4
NPC227192	3,5,4'-Trihydroxy-6,7,3'-Trimethoxyflavone	C18H16O8	360.08	1	1	1
	4'-Hydroxy-3'-Methoxyisoflavone-7-O-Beta-D-	C27H30O1				
NPC231194	Xylopyranosyl-(1->6)-Beta-D-Glucopyranoside	4	578.16	50	1	2
	3'-Hydroxy-4'-Methoxyisoflavone-7-O-Beta-D-	C27H30O1				
NPC235575	Apiofuranosyl-(1->6)-Beta-D-Glucopyranoside	4	578.16	50	1	2
NPC238279	Glycyrrhisoflavone	C20H18O6	354.11	6	5	5
NPC239128	Mosloflavone	C17H14O5	298.08	61	13	14
NPC23955	3',4',5,6-Tetramethoxy Flavone	C19H18O6	342.11	3	2	2
		C28H32O1				
NPC240306	Oxytroflavoside F	5	608.17	40	1	1

NPC240476	(2S,3S)-3,3',4',5,7-Pentahydroxy Flavanonol	C15H12O7	304.06	43	2	2
NPC24136	(2S)-5,7,3',5'-Tetrahydroxy-8-[3'',8''-Dimethylocta-2''(E),7''-Dienyl]Flavonone	C25H28O6 C27H30O1	424.19	1	1	1
NPC241774	5,3'-Dibutanoyloxy-3,6,7,4'-Tetramethoxyflavone	0	514.18	1	5	5
NPC242294	Flavokawain A	C18H18O5	314.12	3	19	30
NPC244250	5,7,4'-Trihydroxy-8-P-Hydroxybenzylidihydroflavonol	C22H18O7	394.11	1	1	1
NPC245207	(3S)-3',7-Dihydroxy-2',4',5', 8-Tetramethoxyisoflavan	C19H22O7	362.14	1	2	2
NPC246328	3,7,3',4'-Tetrahydroxyflavanone	C15H12O6	288.06	2	1	1
NPC246478	5,7,4'-Trihydroxy-3',5'-Bis(3-Methyl-2-Buten-1-Yl)-3,6-Dimethoxyflavone	C27H30O7	466.2	1	1	1
NPC246648	(2S)-7,4'-Dihydroxy-8-Prenylflavan	C20H22O3	310.16	8	1	1
NPC246948	Cajaflavanone	C25H26O5	406.18	1	1	1
NPC24821	Licoflavonol	C20H18O6 C34H26O1	354.11	57	2	11
NPC248739	7,4',7'',4'''-O-Methyl-Amentoflavone	0	594.15	56	3	5
NPC253822	5,2',4'-Trihydroxy-7-Methoxy-5'-(3-Methylbuten-2-Yl)Isoflavone	C21H20O6	368.13	1	1	1
NPC256612	7-Hydroxy-3',4',6,8-Tetramethoxyflavone	C19H18O7	358.11	13	6	8
NPC257011	(2S)-5,7,5'-Trihydroxyflavanone 2'-O-Beta-D-2,6-Di-O-Acetylglucopyranosyl-(1->3)-Alpha-L-2-O-Acetylramnopyranoside	C33H38O1 8 C31H38O1	722.21	1	4	4
NPC257277	5,3'-Dihexanoyloxy-3,6,7,4'-Tetramethoxyflavone	0 C30H22O1	570.25	1	5	9
NPC257667	(2R,3S,2''r,3''r)-Manniflavanone	3	590.11	1	1	5
NPC258331	Rugosaflavonoid B	C19H16O7	356.09	1	5	5
NPC258979	(2S)-7,4'-Dihydroxyflavan	C15H14O3	242.09	1	1	1
NPC259058	Hexamethoxyflavone	C21H22O8	402.13	10	64	66
NPC259632	5,7,3'-Trihydroxy-3,5'-Dimethoxy-2'-(3'-Methylbut-2-Enyl)Flavone	C22H22O7	398.14	1	1	1
NPC25966	(3S)-7-Hydroxy-2',3',4',5', 8-Pentamethoxyisoflavan	C20H24O7 C30H18O1	376.15	1	2	2
NPC259757	Sumaflavone	1	554.08	2	1	3
NPC260895	7,3',4'-Trihydroxy-3-Methoxyflavone	C16H12O6	300.06	35	2	2
NPC261470	4-Demethyltoxicarol Isoflavone	C22H20O7	396.12	2	3	14
NPC261866	5,7,3',5'-Tetrahydroxyflavanone-7-O-Beta-D-Glucopyranoside	C21H20O1	448.1	1	2	3
NPC262623	7-Hydroxy-2',4',5'-Trimethoxyisoflavone	C18H16O6	328.09	1	1	1

NPC263670	Flavokawain C	C17H16O5	300.1	53	5	8
NPC264289	7,3'-Dihydroxy-8,4'-Dimethoxyisoflavone	C17H14O6	314.08	1	1	1
NPC265871	7-Hydroxy-5-Methoxyflavanone	C16H14O4	270.09	4	1	1
NPC266725	(2S)-2,7-Dihydroxy-5-Methoxy-6,8-Dimethylflavanone	C18H18O5	314.12	1	1	2
NPC267117	(3R)-4'-Methoxy-2',3',7-Trihydroxyisoflavanone	C16H14O6	302.08	1	1	1
NPC267375	Cudraflavanone A	C25H26O6	422.17	1	6	8
		C48H30O3	1086.0			
NPC269046	Terflavin A	0	8	1	1	1
NPC269906	3-Methoxy-7-Hydroxy-3',4'-Methylenedioxyflavone	C17H12O6	312.06	1	2	2
NPC270883	Licoflavanone A	C20H18O4	322.12	8	1	1
NPC271059	Ankaflavin	C23H30O5	386.21	1	4	6
		C32H26O1				
NPC271741	Chamaeflavone A	0	570.15	1	2	2
	(2R)-2',4'-Dihydroxy-7-Methoxy-8-Hydroxyethylflavan	C18H20O5	316.13	9	6	6
NPC274717	Hydroxyethylflavan	C18H20O5	316.13	9	6	6
NPC275722	5,6-Dihydroxy-7-Methoxyflavone	C16H12O5	284.07	7	11	19
	5,3'-Dipent-4-Enoyloxy-3,6,7,4'-Tetramethoxyflavone	C29H30O1				
NPC276059	Tetramethoxyflavone	0	538.18	1	5	5
NPC277032	(3R)-4'-Methoxy-2',3,7-Trihydroxyisoflavanone	C16H14O7	318.07	3	5	7
NPC2771	4'-Methoxyflavone	C16H12O3	252.08	1	46	74
NPC277331	(2S)-4',5,7-Trihydroxyflavan-(4Beta->8)-Afzelechin	C30H26O9	530.16	2	6	8
		C34H40O2				
NPC277532	Oxytroflavoside E	0	768.21	40	1	1
NPC278476	(2R,3R)-Lespedezaflavanone C	C25H28O6	424.19	1	1	1
	3'-Benzoyloxy-5-Hydroxy-3,6,7,4'-Tetramethoxyflavone	C26H22O9	478.13	1	5	5
NPC280493	Tetramethoxyflavone	C33H26O1				
NPC280893	5,3'-Dibenzoyloxy-3,6,7,4'-Tetramethoxyflavone	0	582.15	1	5	5
NPC281207	3,7-Dihydroxy-4'-Methoxyflavone	C16H12O5	284.07	1	1	2
NPC281549	Beilschmieflavonoid B	C35H36O9	600.24	1	1	1
NPC283002	Hepatamethoxyflavone	C22H24O9	432.14	1	60	60
NPC283429	7-Hydroxy-5-Methoxy-6,8-Dimethylisoflavone	C18H16O4	296.1	1	1	2
	(-)-(7''r,8''s)-4'',5,7-Trihydroxy-3',3'',5'-Trimethoxy-4',8''-Oxyflavonolignan-7'',9''-Diol	C27H26O1				
NPC284127	4',8''-Oxyflavonolignan-7'',9''-Diol	1	526.15	1	1	1
NPC284424	7-Methoxyflavone	C16H12O3	252.08	17	6	6
	(2S)-6-(Gamma,Gamma-Dimethylallyl)-5-Hydroxy-3',4'-Dimethoxy-6'',6''-Dimethylpyran[2'',3'':7,8]Flavanone	C27H30O6	450.2	8	3	4
NPC284820	Dimethylpyran[2'',3'':7,8]Flavanone	C27H30O6	450.2	8	3	4
NPC285040	(2S)-7,2'-Dihydroxy-4'-Methoxy-8-Prenylflavan	C21H24O4	340.17	8	1	1

	(2S)-5,7,5'-Trihydroxyflavanone 2'-O-Beta-D-4,6-Di- O-Acetylglucopyranosyl-(1->3)-Alpha-L-2-O-	C33H38O1				
NPC288152	Acetylrahmnopyanoside	8	722.21	1	4	4
		C31H20O1				
NPC290830	Sotetsuflavone	0	552.11	35	4	5
		C30H18O1				
NPC291746	Taiwaniaflavone	0	538.09	14	3	5
	(2S)-5,7,3'-Trihydroxy-4'-Methoxy-8-(3"-Methylbut- 2"-Enyl)-Flavonone	C21H22O6	370.14	1	1	1
NPC291878						
NPC292107	5-Hydroxy-3,6,7,8-Tetramethoxyflavone	C19H18O7	358.11	13	1	2
NPC292487	7-Hydroxy-3',4'-Methylenedioxy-Flavone	C16H14O4	270.09	2	5	7
NPC293053	Brousoflavonol F	C25H26O6	422.17	3	2	12
NPC293203	Phaseollinisoflavan	C20H20O4	324.14	7	2	2
NPC293319	Macaflavanone G	C30H36O6	492.25	17	2	2
NPC293852	Atalantoflavone	C20H16O5	336.1	26	8	10
NPC295036	Rugosaflavonoid A	C18H14O6	326.08	1	5	5
NPC295384	4',5,7-Trihydroxy-6,8-Dimethylisoflavone	C17H14O5	298.08	1	3	4
NPC296490	(2S)-5,7,2',4'-Tetrahydroxyflavanone	C15H12O6	288.06	5	2	3
NPC29841	3',5,7-Trihydroxy-3,4',5',6-Tetramethoxyflavone	C19H18O9	390.1	50	7	10
NPC298884	6-Methoxyflavone	C16H12O3	252.08	1	8	15
NPC299379	3,7-Dihydroxyflavone	C15H10O4	254.06	11	22	32
		C17H21N4				
NPC300631	Riboflavin 5'-Phosphate	O9P	456.1	3	5	9
		C30H22O1				
NPC300668	Succedaneaflavanone	0	542.12	1	1	2
NPC300943	5,6,3'-Trihydroxy-3,7,4'-Trimethoxyflavone	C18H16O8	360.08	35	3	4
	(-)-(2S)-5,7,2'-Trihydroxy-5'-(1"',1"'-Dimethylallyl)-					
NPC300988	8-Prenylflavanone	C25H28O5	408.19	5	1	2
NPC302408	5,6,7,3',4',5'-Hexamethoxyflavone	C21H22O8	402.13	6	4	5
	5,7,3'-Trihydroxy-2'-(3-Methylbut-2-Enyl)-4',5'-(3,3- Dimethylpyrano)Isoflavone	C25H24O6	420.16	1	1	2
NPC303174		C31H20O1				
NPC303485	Podocarpusflavone A	0	552.11	27	9	10
NPC303633	Cudraflavone C	C25H26O6	422.17	6	3	5
	2Beta,3Beta-Epoxy-5,7,4'-Trihydroxyflavan- (4Alpha->8)-Epicatechin	C30H24O1				
NPC306267		1	560.13	1	2	10
NPC306441	(-)-4'-Hydroxy-5,7,3'-Trimethoxyflavan-3-Ol	C18H20O6	332.13	1	1	1
NPC306607	(2R,3R)-2',3,5,7-Tetrahydroxy Flavanonol	C15H12O6	288.06	11	2	2
NPC306821	Moslosooflavone	C17H14O5	298.08	24	6	7

NPC30720	Oxytropisoflavan B	C17H20O6	320.13	40	2	2	
NPC308992	(2R,3R)-3,7-Dihydroxy-6-Methoxyflavanone	C16H14O5	286.08	1	5	7	
NPC312973	Abyssinoflavone V	C20H18O5	338.12	1	1	1	
NPC314329	Flavanone	C15H12O2	224.08	4	85	117	
NPC31707	(2S)-7,8,3',4',5'-Pentamethoxyflavan	C20H24O6	360.16	1	7	8	
NPC317492	(+/-)-7,2',4'-Trihydroxy-5"-Isopropenyl-4",5"- Dihydrofurano[2",3":5,6]Isoflavone	C20H16O6	352.09	1	2	2	
NPC318373	(M)(2S),(2"s)-,(P)-(2S),(2"s)-8,8"-5'-Trihydroxy-7,7"- 3',3""-4',4""-5""-Heptamethoxy-5,5""-Biflavan	C37H40O1	2	676.25	1	7	8
NPC320789	Lachnoisoflavone B	C20H14O6	350.08	1	2	2	
NPC321399	Tanariflavanone C	C30H36O7	508.25	1	1	1	
NPC321623	Cudraflavone A	C25H22O6	418.14	3	3	6	
NPC321657	(M)(2S),(2"s)-,(P)-(2S),(2"s)-8,8"-5'5""-Tetrahydroxy- 7,7""-3',3""-4',4""-Hexamethoxy-5,5""-Biflavan	C36H38O1	2	662.24	1	7	8
NPC321779	Tanariflavanone D	C25H28O7	440.18	1	3	3	
NPC32298	Flavone	C15H10O2	222.07	56	81	263	
NPC323209	Flavalin A	C15H22O2	234.16	1	2	8	
NPC324157	Flavalin B	C15H22O3	250.16	1	1	6	
NPC324447	Mucusisoflavone C	C40H34O1	0	674.22	1	2	4
NPC326797	(2S)-2'-Hydroxy-7,8,3',4',5'-Pentamethoxyflavan	C20H24O7	376.15	1	7	8	
NPC327183	Flavalin D	C16H24O3	264.17	1	1	1	
NPC328119	5-Hydroxy-7,2',4',5'-Tetramethoxyflavone	C19H18O7	358.11	1	2	2	
NPC328164	Sophoraflavanone L	C25H28O6	424.19	1	1	1	
NPC32867	Volkensiflavone	C30H20O1	0	540.11	6	9	16
NPC328935	Flavalin C	C16H24O3	264.17	1	1	1	
NPC338131	3',4',5'-Trimethoxyflavanone	C18H18O7	346.11	1	1	1	
NPC34089	Lanaroflavone	C30H18O1	0	538.09	41	2	2
NPC34725	5,3'-Diacetoxy-3,6,7,4'-Tetramethoxyflavone	C23H22O1	0	458.12	1	5	5
NPC34802	Asperflavin	C16H16O5	288.1	9	1	1	
NPC36016	(-)-7-Hydroxy-4'-Methoxyflavan	C16H16O3	256.11	8	1	1	
NPC36217	5,7,3'-Trihydroxy-4'-Methoxy-8,2'-Di(3-Methyl-2- Butenyl)-(2S)-Flavanone	C26H30O6	438.2	2	3	3	
NPC37392	5-Hydroxy-7,8-Dimethoxyflavanone	C17H16O5	300.1	2	1	1	
NPC37684	5,7,3',4'-Tetrahydroxy-6-Geranylflavono	C25H26O7	438.17	1	1	1	
NPC3779	3,5,4'-Trihydroxy-7-Methoxyflavanone	C16H14O6	302.08	3	1	1	

NPC3825	3',4',5,7-Tetrahydroxy-6-(3,3-Dimethylallyl)-Flavone	C20H18O6	354.11	4	4	5
NPC39732	8,5'-Dihydroxy-7,3',4'-Trimethoxyflavone	C18H16O7	344.09	1	7	8
NPC40033	(2S)-6-(Gamma,Gamma-Dimethylallyl)-3',4'-Dimethoxy-6",6"-Dimethylpyran[2",3":7,8]Flavanone	C27H30O5	434.21	2	3	4
NPC42892	(2R,3R)-3-Hydroxy-5-Methoxy-6,7-Methylenedioxyflavanone	C16H12O6	300.06	1	1	1
NPC43243	5,6-Dihydroxy-3,7-Dimethoxyflavone	C17H14O6	314.08	1	1	1
NPC45400	Flavanomarein	1	450.12	2	5	5
NPC469404	5,4'-Dihydroxy-7-Methoxy-3'-(3-Methyl-2-Hydroxybuten-3-Yl)Isoflavone	C21H20O6	368.13	1	1	1
NPC469405	5-Hydroxy-3"-Hydroxy-2",2"-Dimethyldihydropyrano[5",6":3',4']Isoflavone	C21H20O7	384.12	1	1	1
NPC469550	(3R,3S)-7,3'-Dihydroxy-4'-Methoxyisoflavanone	C16H14O5	286.08	1	2	8
NPC470178	5,2',3'-Trihydroxy-6,7-Methylenedioxyflavanone	C16H12O7	316.06	1	1	1
NPC470327	6-Geranyl-3',5,5',7-Tetrahydroxy-4'-Methoxyflavanone	C26H30O7	454.2	1	2	4
NPC470328	6-Geranyl-4',5,5',7-Trihydroxy-3',5'-Dimethoxyflavanone	C27H32O7	468.21	1	3	4
NPC470350	Flavimycin A	C18H18O9	378.1	1	3	4
NPC470351	Flavimycin B	0	408.11	1	3	4
NPC470356	3',7-Dihydroxy-4'-Methoxyflavan	C16H16O4	272.1	1	1	2
NPC470462	5,7,4'-Trihydroxy-3'-(4-Hydroxy-3-Methylbutyl)-5'-(3-Methyl-2-Buten-1-Yl)-3,6-Dimethoxyflavone	C27H32O8	484.21	1	1	2
NPC470890	Abyssinoflavanone Vii	C25H28O6	424.19	1	2	2
NPC471388	Rugosaflavonoid D	C17H18O5	302.12	1	5	5
NPC471389	Rugosaflavonoid E	C17H18O5	302.12	1	5	5
NPC471390	Rugosaflavonoid F	C18H18O5	314.12	1	5	5
NPC471391	Rugosaflavonoid G	C19H20O6	344.13	1	5	5
NPC472460	7,2',4'-Trihydroxyflavanone	C15H12O5	272.07	1	1	2
NPC473014	5,4'-Di-O-Methylsophoraflavanone G	C27H32O6	452.22	1	1	1
NPC473395	Talaroflavone	C14H12O6	276.06	1	27	27
NPC473512	4'-Hydroxy-5 Methoxyflavone-7-O-Glucoxyloside	C27H30O1	578.16	1	2	2

	4',5-Dihydroxy-7-Methoxyflavonol 3-O-[6-O-(E)-3,5-Dimethoxy-4-Hydroxycinnamoyl-Beta-D-Glucopyranosyl]-(1->2)-O-[Alpha-L-Rhamnopyranosyl-(1->6)]-Beta-D-Glucopyranoside	C44H50O2					
NPC473554			4	962.27	1	1	1
		C28H32O1					
NPC473657	5,4'-Dimethoxyflavone-7-Glucoxyloside		4	592.18	1	1	1
	7,3'-Dihydroxy-6-(1,1-Dimethylallyl)-4',5'-(2,2-Dimethyl-3-Hydroxy-Chromano)-6'-(3,3-Dimethylallyl)-Flavan	C30H38O5		478.27	1	3	3
NPC473876							
	4',5,6-Trimethoxyisoflavone-7-O-Beta-D-Glucopyranosyl-(1->4)-Alpha-L-Rhamnopyranosyl-(1->6)-Beta-D-Glucopyranosyl-(1->3)-[Alpha-L-Rhamnopyranosyl-(1->6)-Beta-D-Glucopyranoside	C48H66O2		1106.3			
NPC473895			9	7	1	4	4
	(2S)-2',4'-Dihydroxy-2'-(1-Hydroxy-1-Methylethyl)Dihydrofuro[2,3-H]Flavanone	C20H20O6		356.13	1	1	1
NPC473996							
NPC474206	(2S)-5'-Hydroxy-7,3',4'-Trimethoxyflavan	C18H20O5		316.13	1	7	8
NPC474282	(2S)-8,2'-Dihydroxy-7,3',4',5'-Tetramethoxyflavan	C19H22O7		362.14	1	7	8
NPC474397	Brousoflavan A	C25H30O6		426.2	3	1	10
NPC474836	5,7,4'-Trihydroxy-6,3'-Dimethoxyflavanone	C17H16O7		332.09	1	1	3
	4',5,6-Trimethoxyisoflavone-7-O-Alpha-L-Rhamnopyranosyl-(1->6)-Beta-D-Glucopyranoside	C30H36O1					
NPC475155			5	636.21	1	4	4
	4',5,6-Trimethoxyisoflavone-7-O-Alpha-L-Rhamnopyranosyl-(1->6)-Beta-D-Glucopyranosyl-(1->3)-[Alpha-L-Rhamnopyranosyl-(1->6)-Beta-D-Glucopyranoside	C42H56O2					
NPC475261			4	944.32	1	4	4
NPC475267	5,4'-Dihydroxy-6,7-Dimethoxyflavanone	C17H16O6		316.09	1	1	1
		C30H36O1					
NPC475366	5,7,4'-Trimethoxyflavone-7-O-Glucorhamnoside		5	636.21	1	1	1
		C29H34O1					
NPC475497	5,7,4'-Trimethoxyflavone-7-Glucoxyloside		5	622.19	1	1	1
	5,7,4'-Trihydroxy-3'-(2-Hydroxy-3-Methyl-3-Butenyl)-Isoflavone	C20H18O6		354.11	1	3	3
NPC475705							
NPC475799	Brousoflavonol E	C30H34O7		506.23	3	1	10
		C17H14N2					
NPC476160	Flavopereirine	.CIH		246.12	2	3	4
	5,7-Dihydroxy-6-(2"-Hydroxy-3"-Methylbut-3"-Enyl)-4'-Methoxylisoflavone	C21H20O6		368.13	1	1	1
NPC476178							
NPC476182	5-Methoxy-3,7-Dihydroxyflavanone	C16H14O5		286.08	1	1	1

	5,4'-Dihydroxy-6-(3''-Methylbut-2''-Enyl)-2''-(4''-Hydroxy-4''-Methylethyl)-3''-					
NPC476238	Methoxydihydrofurano-[4''',5''';7,8]Isoflavone	C26H28O7	452.18	1	1	1
NPC476480	7-Hydroxyflavanone	C15H12O3	240.08	1	16	23
NPC477612	Oxytropisoflavan A	C32H32O9	560.2	1	2	2
NPC478213	7,2',5'-trimethoxy-3',4'-methylenedioxy isoflavone	C19H16O7	356.09	1	1	1
NPC48208	5,3'-Dihydroxy-6,7,4'-Trimethoxyflavanone	C18H18O7	346.11	1	2	2
		C33H40O2				
NPC48984	Aescuflavoside A	1	772.21	1	5	9
	7,3',4'-Trihydroxy-6-Methoxy-8,2'-Di(3-Methyl-2-Butenyl)-(2S)-Flavan	C26H32O5	424.22	1	2	2
NPC50250	3'-Hydroxy-4'-Methoxyisoflavone-7-O-Beta-D-Xylopyranosyl-(1->6)-Beta-D-Glucopyranoside	C27H30O1				
NPC51326		4	578.16	50	1	2
NPC51760	Rhusflavanone	C31H24O9	540.14	2	1	2
		C34H26O1				
NPC52611	4',4''',7,7''-Tetra-O-Methylcupressuflavone	0	594.15	20	1	1
		C40H41N4				
NPC52801	Guiaflavine	O2.2CIH	609.32	1	1	1
NPC53781	Flavanthrinin	C15H12O3	240.08	13	7	7
	(-)-(2S)-5,2'-Dihydroxy-6'',6''-Dimethylchromeno-(7,8:2'',3'')-3'-Prenylflavanone	C25H26O5	406.18	5	1	1
NPC54577						
NPC55205	3,7,3'-Trihydroxy-40-Methoxyflavone	C16H12O6	300.06	1	1	2
NPC57601	7-Hydroxyflavone	C15H10O3	238.06	8	44	103
NPC60972	5'-Hydroxy-7,8,3',4'-Tetramethoxyflavone	C19H18O7	358.11	1	7	8
NPC61546	3,5,7-Trimethoxyflavone	C18H16O5	312.1	55	6	11
NPC62536	5,7-Dihydroxy-3',4',5'-Trimethoxyflavone	C18H16O7	344.09	26	4	4
	(-)-(7''s,8''s)-4'',5,7-Trihydroxy-3',5'-Dimethoxy-4',8''-Oxyflavonolignan-7'',9''-Diol	C26H24O1				
NPC63454		0	496.14	1	2	2
NPC6407	5-Hydroxy-4',7-Dimethoxy-Dihydroflavone	C17H16O5	300.1	3	3	3
	5,6,7,4'-Tetrahydroxyflavonol 3-O-(6-Alpha-L-Rhamnopyransyl-Beta-D-Glucopyranoside)	C27H30O1				
NPC65563		6	610.15	1	1	1
		C30H20O1				
NPC66441	2,3-Dihydroamentoflavone	0	540.11	29	2	2
NPC66515	Lespedezaflavanone B	C25H28O5	408.19	1	7	7
		C30H18O1				
NPC67322	Agathisflavone	0	538.09	13	4	9
NPC68882	maximaisoflavone B	C21H18O5	350.12	1	1	1
NPC69394	5-Hydroxy-6,7,3',4'-Tetramethoxyflavone	C19H18O7	358.11	161	10	15
NPC70136	3',4',7-Trihydroxyflavon	C15H10O5	270.05	21	11	26

NPC70409	(2R,3R,4R)-3,4',7-Trihydroxyflavon-(4Beta->8)- Epicatechin	C30H26O1 0	546.15	1	1	2
NPC72425	Robustaflavone-4'-Methyl Ether	C31H20O1 0	552.11	2	6	12
NPC75049	6,8-Di(Gamma,Gamma-Dimethylallyl)-4',7- Dihydroxyflavanone	C25H28O4 C46H42O2	392.2	1	1	1
NPC75574	Spectaflavoside A	2	946.22	1	1	1
NPC76047	3'-Prenyl-4'-Methoxy-Isoflavone-7-O-Beta-D-(2''-O- P-Coumaroyl)Glucopyranoside	C36H36O1 1	644.23	1	1	4
NPC76465	5,7-Dimethoxy-40-Hydroxyflavan	C17H18O4	286.12	1	1	3
NPC77955	3',4'-Dimethoxyflavone	C17H14O4	282.09	1	28	32
NPC78803	Cudraflavone B	C25H24O6	420.16	7	22	41
NPC82325	5,7,3'-Trihydroxy-3,4'-Dimethoxyflavone	C17H14O7	330.07	11	7	9
NPC84585	(2S)-7-Hydroxyflavanone	C15H12O3	240.08	92	8	11
NPC85131	5,7,3',4'-Tetrahydroxy-2'-(3,3- Dimethylallyl)Isoflavone	C20H18O6	354.11	1	4	4
NPC85162	Exiguaflavone A	C25H28O6 C20H23NO	424.19	2	1	1
NPC85747	O-Methylflavinantine	4	341.16	20	4	8
NPC86069	Trigoflavidol C	C16H14O5	286.08	1	6	8
NPC87486	(2S)-5,7-Dimethoxy-8-(2R-Hydroxy-3-Methyl-3- Butenyl)-Flavanone	C22H24O5 C19H18O1	368.16	1	1	1
NPC88243	Erigeroflavanone	0	406.09	1	1	1
NPC88739	Trigoflavidol B	C35H32O1 0	612.2	1	6	11
NPC88804	3',4',5,7-Tetrahydroxy-8-(3,3-Dimethylallyl)-Flavone	C20H18O6	354.11	10	5	6
NPC9002	(2S)-5,7,5'-Trihydroxyflavanone 2'-O-Beta-D-3,4,6- Tri-O-Acetylglucopyranosyl-(1->3)-Alpha-L-2-O- Acetylramnopyranoside	C35H40O1 9	764.22	1	4	4
NPC90497	Mucusisoflavone A	C40H32O1 0	672.2	2	1	3
NPC91478	Anthraflavicacid	C14H8O4	240.04	5	72	89
NPC92659	Skullcapflavone Ii	C19H18O8	374.1	16	60	60
NPC93398	7,4'-Dihydroxyflavan	C15H14O3	242.09	4	7	8
NPC93552	5,7,3',4'-Tetrahydroxy-2',5'-Di(3-Methylbut-2- Enyl)Isoflavone	C25H26O6	422.17	1	1	2
NPC93730	Flavonol	C15H10O3 C17H20N4	238.06	7	60	124
NPC94167	Riboflavin	O6	376.14	41	34	184
NPC94750	(2S)-5'-Hydroxy-7,8,3',4'-Tetramethoxyflavan	C19H22O6	346.14	1	7	8

NPC97716	Alpinumisoflavone	C20H16O5	336.1	72	7	12
NPC99597	(2S)-7-Hydroxy-6-Methoxyflavanone	C16H14O4	270.09	1	5	7
NPC99854	5,7,4'-Trimethoxyflavanone	C18H18O5	314.12	1	3	3

Suppl. Table S2. 108 hits by searching "saponin" in the NPASS database.

Natural Product ID	Natural Product Name	Formular	Molecular Weight	# Source Organism	# Target	# Activity Record
NPC98386	Soyasapogenol B	C30H50O3	458.38	80	2	8
NPC98018	Timosaponin I2	C56H94O28 C23H26N2O	1214.59	2	18	19
NPC97100	Kopsaporine	6	426.18	9	1	1
NPC82380	Bunkankasaponin B	C60H92O24	1196.6	2	9	10
NPC77310	Withalongolidesaponin	C33H46O10	602.31	1	3	5
NPC76972	Kalopanaxsaponin B	C59H96O26	1220.62	26	5	8
NPC67857	Hederasaponin B	C59H96O25	1204.62	18	4	4
NPC66593	Aloesaponarin I	C17H12O6	312.06	1	3	4
NPC57065	Saikosaponin-B1	C42H68O13	780.47	3	5	5
NPC54521	Saikosaponin-B2	C42H68O13	780.47	3	6	8
NPC47763	Soyasapogenol A	C30H50O4	474.37	2	2	8
NPC477032	Arboreasaponin B	C45H72O18	900.47	1	2	2
NPC477031	Arboreasaponin A	C47H74O18	926.49	1	2	2
NPC476780	Assamsaponins D	C59H92O27	1232.58	1	1	1
NPC476779	Assamsaponins A	C57H88O25	1172.56	1	1	1
NPC476778	Theasaponins E2	C59H90O27	1230.57	1	1	1
NPC476777	Theasaponins E1	C59H90O27	1230.57	1	1	1
NPC476776	Theasaponins F3	C60H92O28	1260.58	1	1	1
NPC476775	Theasaponins A2	C59H92O27	1232.58	1	1	1
NPC476774	Theasaponins A1	C57H90O26	1190.57	1	1	1
NPC476693	Bacopasaponsin C	C46H74O17	898.49	1	1	2
NPC476547	Fistulosaponin F	C51H84O25	1096.53	1	1	6
NPC476546	Fistulosaponin E	C51H82O24	1078.52	1	1	6
NPC476545	Fistulosaponin D	C51H82O25	1094.51	1	1	6
NPC476544	Fistulosaponin C	C51H82O23	1062.52	1	1	6
NPC476543	Fistulosaponin B	C51H82O23	1062.52	1	1	6
NPC476542	Fistulosaponin A	C51H80O22	1044.51	1	1	6
NPC476305	Songarosaponin D	C54H88O23	1104.57	1	10	11
NPC476226	Saikosapogenin A	C29H46O4	458.34	1	9	9
NPC475899	Polygalasaponin V	C58H94O27	1222.6	1	1	2
NPC475171	Cynarasaponin C	C42H66O15	810.44	1	1	2
NPC473645	Polygalasaponin H	C52H82O23	1074.52	1	1	2
NPC470518	Bunkankasaponin F	C60H92O23	1180.6	1	9	10
NPC470478	Erucasaponin A	C54H86O22	1086.56	2	1	1
NPC470312	Gypensapogenin D	C36H56O8	616.4	1	2	3
NPC469782	Kizuta Saponin K12	C59H96O26	1220.62	1	2	2

NPC46823	Yuchasaponin A	C64H100O28	1316.64	1	1	4
NPC45606	Prosapogenin 11	C86H138O41	1826.87	1	1	1
NPC43589	Porsapogenin 9 Clematomandshurica	C86H138O42	1842.87	1	1	1
NPC4328	Saponin C	C76H124O39	1660.77	1	2	2
NPC40775	Chikusetsusaponin-Iv Chikusetsusaponin-Iva Butyl	C47H74O18	926.49	74	1	2
NPC39211	Ester	C46H74O14	850.51	17	50	62
NPC37134	Prosapogenin I	C47H76O18	928.5	1	1	1
NPC33068	Zanhasaponin C	C58H90O29	1250.56	3	2	2
NPC312650	Floratheasaponin A	C58H90O26	1202.57	1	1	9
NPC30279	Sasanquasaponin Ii	C59H94O26	1218.6	1	1	4
NPC300655	Porsapogenin 8	C92H148O47	2004.92	1	1	1
NPC300419	Polygalasaponin E	C47H74O19	942.48	1	1	2
NPC291203	Prototimosaponin Aiii	C45H76O19	920.5	1	2	3
NPC29069	Dipsacussaponin A	C42H68O14	796.46	1	1	1
NPC284449	Desacyl-Theasaponin E	C52H82O25	1106.51	1	1	6
NPC279915	Theasaponin E2	C58H88O27	1216.55	1	1	6
NPC277212	Sasanquasaponin Iii	C59H94O26	1218.6	1	1	4
NPC271610	Chakasaponins I	C59H92O26	1216.59	1	1	5
NPC259152	Saponarin	C27H30O17	626.15	1	5	16
NPC257211	Zanhasaponin B	C53H82O25	1118.51	3	2	2
NPC250089	Sapinmusaponin F Chikusetsusaponin-Iv	C43H70O12	778.49	7	2	9
NPC249848	Methyl Ester	C48H76O18	940.5	15	1	2
NPC248944	Sarsasapogenin	C27H44O3	416.33	54	5	9
NPC247315	Licorice Saponin A3	C48H72O21	984.46	5	1	2
NPC247037	Parisaponin I	C50H82O22	1034.53	1	2	4
NPC244296	Bunkankasaponin A	C57H88O24	1156.57	1	9	10
NPC236657	Soyasaponin I	C48H78O18	942.52	142	3	9
NPC235405	Chikusetsusaponin-Ib	C53H84O23	1088.54	2	1	2
NPC232237	Prosapogenin 3	C46H72O17	896.48	1	1	1
NPC229976	Gypensapogenin A	C30H42O2	434.32	5	3	4
NPC225791	Sasanquasaponin I	C60H96O26	1232.62	1	1	4
NPC224314	Parissaponin Pb 3-O-[Beta-D- Glucuronopyranosyl]Soyasa	C56H90O24	1146.58	1	1	1
NPC224121	pogenol B	C36H58O9	634.41	1	2	6
NPC221110	Saikosaponin A	C42H68O13	780.47	5	12	16
NPC220838	Prosapogenin 12	C92H148O46	1988.92	1	1	1
NPC217205	Timosaponin Bii	C45H76O19	920.5	1	1	1

Chikusetsusaponin-Iva						
NPC214484	Methyl Ester	C43H68O14	808.46	23	1	2
NPC213952	Zanhasaponin A	C48H74O21	986.47	3	2	2
NPC213412	Soyasapogenol E	C30H48O3 C48H75NO1	456.36	42	2	8
NPC210729	Prosapogenin 4	7	937.5	2	4	5
NPC207738	Porsapogenin 5	C53H84O22	1072.55	1	1	1
NPC201406	Gypensapogenin D	C30H46O3 C48H77NO1	454.34	5	3	4
NPC200788	Prosapogenin 2	8	955.51	2	2	2
NPC192791	Chikusetsusaponin-V	C48H76O18	940.5	8	1	2
NPC192765	Chakasaponin Ii	C62H96O27	1272.61	1	2	14
NPC190442	Gypensapogenin B	C30H42O2	434.32	5	3	4
NPC187618	Soysaponin A2	C53H86O22	1074.56	1	2	6
NPC187290	Kalopanax-Saponin F	C53H84O23	1088.54	1	1	1
NPC183816	Prosapogenin 10	C86H138O43	1858.86	1	6	6
NPC180550	Spinasaponin A Methyl Ester	C43H68O14	808.46	1	5	5
NPC180204	Gypensapogenin G	C32H50O5	514.37	5	1	1
NPC178264	Chakasaponin Iii	C59H92O27 C49H77NO1	1232.58	1	1	1
NPC172365	Porsapogenin 7	7	951.52	1	1	1
NPC162574	Dehydrosoyasaponin I	C49H78O18	954.52	1	2	8
NPC159309	Glucoside	C48H76O19	956.5	1	2	2
NPC157868	Chikusetsusaponin Iva	C42H66O14	794.45	100	3	4
NPC157530	Sapinmusaponin G	C43H70O12	778.49	7	2	9
NPC14630	Sapinmusaponin H	C43H70O12	778.49	7	2	9
NPC141769	Timosaponin Aiii	C39H64O13	740.43	51	8	35
NPC141600	Bunkankasaponin C	C57H88O24	1156.57	1	9	10
NPC128123	Pseudoprotimosaponin Aiii	C45H74O18	902.49	1	1	2
NPC126993	Gypensapogenin C	C30H46O2	438.35	5	3	4
NPC118440	apogenol B	C48H78O19	958.51	1	2	6
NPC11577	Bunkankasaponin D	C60H92O24	1196.6	2	9	10
NPC112492	Gleditsia Saponin C	C94H148O43	1964.94	2	4	6
NPC112009	Gypensapogenin E	C30H48O4	472.36	5	1	1
NPC110700	Theasaponin E1	C58H88O27	1216.55	1	1	9
NPC110656	Saikosaponin-B3	C43H72O14	812.49	1	6	8
NPC110494	Buddlejasaponin Iv	C48H78O18	942.52	6	11	17

NPC105800	Porsapogenin 6 Kizuta Cirensenoside O	C47H74O17	910.49	1	1	1
NPC102439	Saponin K3	C48H78O18	942.52	3	2	2
NPC100639	Kalopanaxsaponin C	C65H106O31	1382.67	1	1	1

Suppl. Table S3. 100 hits by searching "flav" in HIT 2.0 database.

Compound id	Common Name	Formula	CAS ID	Pubchem ID
C0026	Diosmetin	C16H12O6	CAS:520-34-3	CID:5281612
C0027	Diosmin	C28H32O15	CAS:520-27-4	CID:5281613
C0046	Epigallocatechin	C15H14O7	CAS:970-74-1	CID:72277
C0050	Eriodictyol	C15H12O6	CAS:552-58-9	CID:440735
C0065	Eupafolin	C16H12O7	CAS:520-11-6	CID:5317284
C0066	Eupatilin	C18H16O7	CAS:22368-21-4	CID:5273755
C0067	Eupatorin	C18H16O7	CAS:855-96-9	CID:97214
C0074	Fisetin	C15H10O6	CAS:528-48-3	CID:5281614
C0075	Flavanone	C15H12O2	CAS:487-26-3	CID:10251
C0076	Flavin Adenine Dinucleotide	C27H33N9O15P2	NA	CID:643975
C0077	Flavone	C15H10O2	CAS:525-82-6	CID:10680
C0078	Flavonol	C15H10O3	CAS:577-85-5	CID:11349
C0083	Formononetin	C16H12O4	CAS:485-72-3	CID:5280378
C0089	Galangin	C15H10O5	CAS:548-83-4	CID:5281616
C0101	Genistein	C15H10O5	CAS:446-72-0	CID:5280961
C0118	Hesperetin	C16H14O6	CAS:520-33-2	CID:72281
C0119	Hesperidin	C28H34O15	CAS:520-26-3	CID:10621
C0124	Hispidulin	C16H12O6	CAS:1447-88-7	CID:5281628
C0133	Hyperoside	C21H20O12	CAS:482-36-0	CID:5281643
C0153	Isoorientin	C21H20O11	CAS:4261-42-1	CID:114776
C0156	Isoquercetin	C21H20O12	CAS:482-35-9	CID:5280804
C0157	Isorhamnetin	C16H12O7	CAS:480-19-3	CID:5281654
C0159	Isovitexin	C21H20O10	CAS:38953-85-4	CID:162350
C0160	Isoxanthohumol	C21H22O5	CAS:70872-29-6	CID:513197
C0164	Kaempferol	C15H10O6	CAS:520-18-3	CID:5280863
C0169	Kurarinol	C26H32O7	CAS:855746-98-4	CID:44563198
C0193	Liquiritin	C21H22O9	CAS:551-15-5	CID:503737
C0199	Luteolin	C15H10O6	CAS:491-70-3	CID:5280445

C0225	Morin	C15H1007	CAS:480-16-0	CID:5281670
C0229	Myricetin	C15H1008	CAS:529-44-2	CID:5281672
C0230	Myricitrin	C21H20O12	CAS:17912-87-7	CID:5281673
C0242	Naringenin	C15H12O5	CAS:480-41-1	CID:439246
C0243	Naringin	C27H32O14	CAS:10236-47-2	CID:442428
C0249	Nobiletin	C21H22O8	CAS:478-01-3	CID:72344
C0267	Oroxilin A	C16H12O5	CAS:480-11-5	CID:5320315
C0312	Pinocembrin	C15H12O4	CAS:480-39-7	CID:68071
C0325	Progesterone	C21H30O2	CAS:57-83-0	CID:5994
C0334	Prunetin	C16H12O5	CAS:552-59-0	CID:5281804
C0351	Quercetagetin	C15H1008	CAS:90-18-6	CID:5281680
C0352	Quercetin	C15H1007	CAS:117-39-5	CID:5280343
C0354	Quercitrin	C21H20O11	CAS:522-12-3	CID:5280459
C0368	Rhamnetin	C16H12O7	CAS:90-19-7	CID:5281691
C0371	Riboflavin	C17H20N4O6	NA	CID:493570
C0377	Rutin	C27H30O16	CAS:153-18-4	CID:5280805
C0382	Sakuranetin	C16H14O5	CAS:2957-21-3	CID:73571
C0394	Scutellarein	C15H10O6	CAS:529-53-3	CID:5281697
C0395	Scutellarin	C21H18O12	CAS:27740-01-8	CID:185617
C0408	Sinensetin	C20H20O7	CAS:2306-27-6	CID:145659
C0425	Tangeretin	C20H20O7	CAS:481-53-8	CID:68077
C0433	Taxifolin	C15H12O7	CAS:480-18-2	CID:471
C0457	Tricin	C17H14O7	CAS:520-32-1	CID:5281702
C0483	Vitexin	C21H20O10	CAS:3681-93-4	CID:5280441
C0485	Wogonin	C16H12O5	CAS:632-85-9	CID:5281703
C0486	Xanthohumol	C21H22O5	CAS:6754-58-1	CID:639665
C0495	Herbacetin	C15H10O7	CAS:527-95-7	CID:5280544
C0497	Ginkgetin	C32H22O10	CAS:481-46-9	CID:5271805
C0500	Prunin	C21H22O10	CAS:529-55-5	CID:92794
C0504	Limonene	C10H16	CAS:138-86-3	CID:440917
C0519	Pinostrobin	C16H14O4	CAS:480-37-5	CID:73201

C0532	Procyanidin B2	C30H26O12	CAS:29106-49-8	CID:122738
C0566	Hesperitin	C16H14O6	CAS:520-33-2	CID:3593
C0587	(+)-Taxifolin	C15H12O7	CAS:480-18-2	CID:439533
C0656	Spinosin	C28H32O15	CAS:72063-39-9	CID:155692
C0664	Ampelopsin	C15H12O8	CAS:27200-12-0	CID:161557
C0667	Cirsilineol	C18H16O7	CAS:41365-32-6	CID:162464
C0703	Farrerol	C17H16O5	CAS:24211-30-1	CID:442396
C0706	Swertiajaponin	C22H22O11	CAS:6980-25-2	CID:442659
C0717	Alpinetin	C16H14O4	CAS:36052-37-6	CID:821279
C0754	Orientin	C21H20O11	CAS:28608-75-5	CID:5281675
C0756	irisolidone	C17H14O6	CAS:2345-17-7	CID:5281781
C0759	Tectorigenin	C16H12O6	CAS:548-77-6	CID:5281811
C0765	Glycitein	C16H12O5	CAS:40957-83-3	CID:5317750
C0777	5,7,2',3'-Tetrahydroxyflavone 5-Hydroxy-6,7,8,3',4'-	C15H10O6	CAS:74805-70-2	CID:5321864
C0780	Pentamethoxyflavone	C20H20O8	CAS:2174-59-6	CID:5324642
C0788	Irigenin	C18H16O8	CAS:548-76-5	CID:5464170
C0811	Isoxanthohumol	C21H22O5	CAS:70872-29-6	CID:9928523
C0827	7,8-Dihydroxyflavone	C15H10O4	CAS:38183-03-8	CID:1880
C0836	8-Prenylapigenin	C20H18O5	CAS:72357-31-4	CID:10246505
C0838	8-Prenylaringenin	C20H20O5	CAS:53846-50-7	CID:480764
C0845	Acacetin	C16H12O5	CAS:480-44-4	CID:5280442
C0891	Amentoflavone	C30H18O10	CAS:1617-53-4	CID:5281600
C0914	Apigenin	C15H10O5	CAS:520-36-5	CID:5280443
C0935	Astragalin	C21H20O11	CAS:480-10-4	CID:5282102
C0965	taxifolin	C16H14O6	CAS:480-18-2	CID:5321695
C0999	eriodictyol	C15H12O6	CAS:552-58-9	CID:11095
C1017	puerarin	C21H20O9	CAS:3681-99-0	CID:5385074
C1072	quercitrin	C21H20O11	CAS:522-12-3	CID:5353915
C1078	neohesperidin	C28H34O15	CAS:13241-33-3	CID:73395
C1102	casticin	C19H18O8	CAS:479-91-4	CID:5315263

C1114	Baicalein	C15H10O5	CAS:491-67-8	CID:5281605
C1136	Bavachin	C20H20O4	CAS:19879-32-4	CID:14236566
C1187	Bilobetin	C31H20O10	CAS:521-32-4	CID:5315459
C1188	Biochanin	C16H12O5	CAS:491-80-5	CID:5280373
C1208	Calycosin	C16H12O5	CAS:20575-57-9	CID:5280448
C1224	Centaureidin	C18H16O8	CAS:17313-52-9	CID:5315773
C1237	Chrysin	C15H10O4	CAS:480-40-0	CID:5281607
C1238	Chrysin Dimethyl Ether	C17H14O4	CAS:21392-57-4	CID:88881
C1239	Chrysoeriol	C16H12O6	CAS:491-71-4	CID:5280666
C1278	Daidzein	C15H10O4	CAS:486-66-8	CID:5281708
C1279	Daidzin	C21H20O9	CAS:552-66-9	CID:107971

Suppl. Table S4. 24 hits by searching "sapo" in the HIT 2.0 database.

Compound id	Common Name	Formula	CAS ID	Pubchem ID
C0025	Dioscin	C45H72O16	CAS:19057-60-4	CID:119245
C0110	Glycyrrhizin	C42H62O16	CAS:103000-77-7	CID:14982
C0159	Isovitexin	C21H20O10	CAS:38953-85-4	CID:162350
C0641	Saikosaponin D	C42H68O13	CAS:20874-52-6	CID:107793
C0650	Soyasaponin I	C48H78O18	CAS:51330-27-9	CID:122097
C0652	Uralsaponin A	C42H62O16	CAS:103000-77-7	CID:128229
C0672	Saikosaponin A	C42H68O13	CAS:20736-09-8	CID:167928
C0698	Ginsenoside Re	C48H82O18	CAS:52286-59-6	CID:441921
C0700	Ginsenoside Rg1	C42H72O14	CAS:22427-39-0	CID:441923
C0810	Ginsenoside Rb1	C54H92O23	CAS:41753-43-9	CID:9898279
C0812	Araloside A	C47H74O18	CAS:7518-22-1	CID:10079497
C0814	Collettiside Iii	C45H72O16	CAS:19057-60-4	CID:10653210
C0822	Esculentoside A	C42H66O16	CAS:65497-07-6	CID:11657924
C0823	Ginsenoside Rd	C48H82O18	CAS:52705-93-8	CID:11679800
C0842	Chikusetsusaponin Iva	C42H66O14	CAS:51415-02-2	CID:13909679
C0866	Ginsenoside Rg2	C42H72O13	CAS:52286-74-5	CID:21599924
C0886	Dioscin	C45H72O16	CAS:19057-60-4	CID:45358125
C0893	Ginsenoside Rb1	C54H92O23	CAS:41753-43-9	CID:59070837
C0932	Ginsenoside Rg2	C42H72O13	CAS:52286-74-5	CID:124893126
C1047	b-group soyasaponin	NA	CAS:41753-NA	NA
C1048	ginsenoside rbl	C54H92O23	CAS:41753-43-9	CID:73148

C1095	saponin	C27H42O3	CAS:8047-15-2	NA
C1101	ginsenoside rb1	C54H92O23	CAS:41753-43-9	CID:73148
C1126	ginsenoside re	C48H82O18	CAS:52286-59-6	CID:73149

Suppl. Table S5. Medicinal plants referred in Russian Pharmacopoeia 14th edition, which are standardized by the content of flavonoids.

Plant name	Method	Analysed substances	Quantitative content
<i>Achilleae millefolii</i> herba	Spectrophotometry	Total flavonoid content expressed as luteolin equivalents	At least 0.4 %
<i>Artemisiae absintii</i> herba	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 0.3 %
<i>Betulae</i> folia	Spectrophotometry	Total flavonoid content expressed as hyperoside equivalents	At least 1.5 %
<i>Calendulae officinalis</i> flores	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 1.0 %
<i>Chamomillae recutitae</i> flores	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 1.2 %
<i>Crataegi</i> flores	HPTLC+ Spectrophotometry	Content of hyperoside	at least 0.5 %
<i>Crataegi</i> fructus	Spectrophotometry	Total flavonoid content expressed as hyperoside equivalents	At least 0.04 %
<i>Equiseti arvensis</i> herba	Spectrophotometry	Total flavonoid content expressed as quercetin equivalents	At least 0.3 %
<i>Ginkgo biloba</i> folia	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 0.5 %
<i>Gnaphalii uliginosi</i> herba	Spectrophotometry	Total flavonoid content expressed as gnafalozide A equivalents	At least 0.2 %
<i>Helichrysi arenarii</i> flores	Spectrophotometry	Total flavonoid content expressed as isosalipurposide equivalents	At least 3.0 %
<i>Humuli lupuli</i> fructus	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 0.3 %
<i>Hyperici</i> herba	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 1.5 %
<i>Leonuri</i>	Spectrophotometry	Total flavonoid content	At least 0.2 %

herba	ometry	expressed as rutin equivalents	
<i>Menthae piperitae</i> folia	Spectrophotometry	Total flavonoid content expressed as luteolin equivalents	At least 0.6 %
<i>Menyanthidis trifoliatae</i> folium	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 1.0 %
<i>Ononis arvensis</i> radices	Spectrophotometry	Total isoflavonoid content expressed as ononin equivalents	At least 1.5 %
<i>Origanum vulgare</i> herba	Spectrophotometry	Total flavonoid content expressed as luteolin equivalents	At least 0.8 %
<i>Polygonum aviculare</i> herba	Spectrophotometry	Total flavonoid content expressed as avicularin equivalents	At least 0.5 %
<i>Polygonum hydropiperis</i> herba	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 1.5 %
<i>Polygonum persicariae</i> herba	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 0.9 %
<i>Rosa</i> fructus	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 0.4 %
<i>Sambucus nigra</i> flores	Spectrophotometry	Total flavonoid content expressed as rutin equivalents	At least 2.0 %
<i>Silybum marianum</i> fructus	Spectrophotometry	Total flavolignans content expressed as silybin equivalents	At least 2.4 %
<i>Tanacetum vulgare</i> flores	Spectrophotometry	Total flavonoid and phenolcarboxylic acids content expressed as luteolin equivalents	At least 2.5 %
<i>Thymum serpyllifolium</i> herba	Spectrophotometry	Total flavonoid content expressed as luteolin-7-O-glucoside equivalents	At least 0.9 %
<i>Thymum vulgare</i> herba	Spectrophotometry	Total flavonoid content expressed as luteolin-7-O-glucoside equivalents	At least 1.0 %
<i>Viola</i> herba	Spectrophotometry	Total flavonoid content expressed as rutin	At least 1.0 %

equivalents

Suppl. Table S6. Medicinal plants referred in Russian Pharmacopoeia 14th edition, which are standardized by the content of saponins.

Plant name	Method	Analysed substances	Quantitative content
<i>Araliae elatae</i> radices	Potentiometric titration	Total aralosides content expressed as the ammonium salt of aralosides A, B, C with an average molecular weight	At least 5.0 %
<i>Glycyrrhizae</i> radices	Spectrophotometry	Content of glycyrrhizic acid	At least 6.0 %
<i>Panacis ginseng</i> radices	Spectrophotometry	Total panaxosides content expressed as panaxoside Rg1 equivalents	At least 2.0 %
<i>Polemonii caerulei</i> rhizomata cum radicibus	Spectrophotometry	Total triterpene saponins content expressed as β -aescin equivalents	At least 10.0 %

Suppl. Table S7 Medicinal plants referred in Chinese Pharmacopoeia (2020 Ed), which are standardized by the content of flavonoids.

Plant name	Used part	Chinese name	Method	Analysed substances	Quantitative content
<i>Crataegus pinnatifida</i> Bge. var. major N.E. Br. or <i>Crataegus pinnatifida</i> Bge.	leaf	山楂叶	Ultraviolet-visible spectrometer (UV-Vis) for total flavonoids and high-performance liquid chromatography (HPLC) for hyperoside	total flavonoids calculated as content of rutin, and hyperoside	total flavonoids: at least 7.0 %; hyperoside: at least 0.050 %
<i>Vaccaria segetalis</i> (Neck.) Garcke	seed	王不留行	HPLC	6-(2-O-alpha-L-Arabinopyranosyl-beta-D-glucopyranosyl)-2-[4-(beta-D-glucopyranosyloxy)phenyl]-5,7-dihydroxy-4H-1-benzopyran-4-one	at least 0.40 %
<i>Arisaema erubescens</i> (Wall.) Schott, <i>Arisaema heterophyllum</i> Bl., or <i>Arisaema amurense</i> Maxim	rhizome	天南星	UV-Vis	total flavonoids calculated as content of apigenin	at least 0.050 %
<i>Scutellaria barbata</i> D. Don	whole herb	半枝莲	UV-Vis	total flavonoids calculated as content of scutellarin	at least 1.50 %

<i>Hippophae rhamnoides</i> L.	fruit	沙棘	UV-Vis (total flavonoids) and HPLC (isorhamnetin)	total flavonoids calculated as content of rutin , and isorhamnetin	total flavonoids: at least 1.5 % ; isorhamnetin: at least 0.10 %
<i>Selaginella tamariscina</i> (Besiu.) Spring or <i>Selaginella pulvinata</i> (Hook. et Grev.) Maxim.	whole herb	卷柏	HPLC	Amentoflavone	at least 0.30 % ;
<i>Astragalus membranaceus</i> (Fisch.) Bge. var. mongholicus (Bge.) Hsiao or <i>Astragalus membranaceus</i> (Fisch.) Bge.	root	黄芪	HPLC	Calycosin-7-glucoside	at least 0.020 % ;
<i>Ginkgo biloba</i> L.	leaf	银杏叶	HPLC	total flavonoids calculated as content of quercetin, kaempferol , and isorhamnetin	at least 0.40 % ;
<i>Epimedium brevicomum</i> Maxim., <i>Epimedium sagittatum</i> (Sieb. et Zucc.) Maxim., <i>Epimedium pubescens</i> Maxim., or <i>Epimedium koreanum</i> Nakai	leaf	淫羊藿	HPLC	total flavonoids calculated as content of icariin	at least 5.0 % ;
<i>Sophora japonica</i> L.	flower and bud	槐花	UV-Vis	total flavonoids calculated as content of rutin	at least 8.0 % ;
<i>Acacia catechu</i> (L. f.) Willd.	decocted paste	儿茶	HPLC	(-)-catechin hydrate and L-epicatechin	at least 21.0 % ;

Suppl. Table S7. Medicinal plants referred in Chinese Pharmacopoeia (2020 Ed), which are standardized by the content of saponins.

Plant name	Used part	Chinese name	Method	Analysed substances	Quantitative content
<i>Astragalus membranaceus</i> (Fisch.) Bge. var. <i>mongholicus</i> (Bge.) Hsiao or <i>Astragalus membranaceus</i> (Fisch.) Bge.	root	黄芪	HPLC	Astragaloside A	at least 0.080 % ; at least 0.30 % for ginsenoside Rg1 and Re ; at least 0.20 % for ginsenoside Rb1
<i>Panax ginseng</i> C. A. Mey.	root and rhizome	人参	HPLC	Ginsenoside Rg1 and Re , and Rb1	
<i>Panax ginseng</i> C. A. Mey.	leaf	人参叶	HPLC	Ginsenoside Rg1 and Re	at least 2.25 %
<i>Panax noto ginseng</i> (Burk.) <i>Lonicera macranthoides</i> Hand.-Mazz., <i>Lonicera hypoglauca</i> Miq., <i>Lonicera confusa</i> DC., or <i>Lonicera fulvotomentosa</i> Hsu et S.C.Cheng	root and rhizome	三七	HPLC	Ginsenoside Rg1 and Re , and Notoginsenoside R1	at least 5.0 %
<i>Momordica cochinchinensis</i> (Lour.) Spreng.	flower and bud	山银花	HPLC	macranthoidin B and dipsacoside B	at least 5.1 %
	seed	木鳖子	HPLC	gypsogenin-3-O-glucuronide	at least 0.25 %
<i>Achyranthes bidentata</i> Bl.	root	牛膝	HPLC	Hydroxyecdysone	at least 0.030 %

<i>Pulsatilla chinensis</i> (Bge.) Regel	root whole	白头翁	HPLC	pulchrenoside B4	at least 4.6 %
<i>Polygala japonica</i> Houtt.	herb	瓜子金	HPLC	Polygalasaponin F	at least 0.60 %
<i>Kochia scoparia</i> (L.) Schrad.	fruit	地肤子	HPLC	momordinic	at least 1.8 %
<i>Panax quinquefolium</i> L.	root	西洋参	HPLC	Ginsenoside Rg1, Re, and Rb1	at least 2.0 %
<i>Panax japonicus</i> C. A. Mey.	rhizome steamed root and	竹节参	HPLC	Ginsenoside Ro and chikusetsu saponin IVa	at least 1.5 % for each at least 0.25 % for ginsenoside Rg1 and Re; at least 0.20 % for ginsenoside Rb1
<i>Panax ginseng</i> C. A. Mey.	rhizome	红参	HPLC	Ginsenoside Rg1, Re, and Rb1	
<i>Ophiopogon japonicus</i> (L.f) Ker-Gawl.	root	麦冬	UV-Vis	total saponins caculated as content of ruscogenin	at least 0.12 %
<i>Polygala tenuifolia</i> Willd. or <i>Polygala sibirica</i> L.	root	远志	HPLC	Tenuifolin	at least 2.0 %
<i>Siraitia grosvenorii</i> (Swingle) C. Jeffrey ex A.M.Lu et Z.Y.Zhang	fruit	罗汉果	HPLC	Mogroside V	at least 0.5 %
<i>Anemarrhena asphodeloides</i> Bge. <i>Paris polyphylla</i> Smith var. <i>yunnanensis</i> (Franch.) Hand.-Mazz. or <i>Paris polyphylla</i> Smith var. (Franch.) Hara	rhizome rhizome	知母 重楼	HPLC HPLC	Timosaponin BII Polyphyllin D, formosanin C, and Chonglou Saponin VII	at least 3.0 % at least 0.6 %

<i>Impatiens balsamina</i> L.	seed	急性子	HPLC	Hosenkoside K and A	at least 0.20 %
<i>Dioscorea nipponica</i> Makino	rhizome	穿山龙	HPLC	Dioscin	at least 1.3 %
<i>Panax japonicus</i> C.A.Mey. var. major (Burk.) C.Y.Wu et K.M.Feng or <i>Panax japonicus</i> C.A.Mey. var. bipinnatifidus (Seem.) C.Y.Wu et K.M.Feng	rhizome	珠子参	HPLC	Chikusetsusaponin IVA	at least 3.0 %
<i>Platycodon grandiflorum</i> (Jacq.) A.DC.	root	桔梗	HPLC	Platycodin D	at least 0.1 %
<i>Bupleurum chinense</i> DC.or <i>Bupleurum scorzonerifolium</i> Willd.	root	柴胡	HPLC	Saikosaponin A and D	at least 0.3 %
<i>Aesculus chinensis</i> Bge., <i>Aesculus chinensis</i> Bge. var. chekiangensis (Hu et Fang) Fang, or <i>Aesculus wilsonii</i> Rehd.	seed	娑罗子	HPLC	Escin IA	at least 0.70 %
<i>Aebia quinata</i> (Thunb.) Decne., <i>Akebia trifoliata</i> (Thunb.) Koidz.or <i>Akebia trifoliata</i> (Thunb.) Koidz. var. australis (Diels) Rehd.	fruit	预知子	HPLC	α -hederin	at least 0.20 %
<i>Dioscorea panthaica</i> Prain et Burk.	rhizome	黄山药	HPLC	protogracellin	at least 0.050 %

<i>Cuscuta australis</i> R. Br. or <i>Cuscuta chinensis</i> Lam.	seed	菟丝子	HPLC	Hyperoside	at least 0.01 %
<i>Phytolacca acinosa</i> Roxb.or <i>Phytolacca americana</i> L	root	商陆	HPLC	Esculentoside A	at least 0.15 %
<i>Dipsacus asper</i> Wall. ex Henry	root	续断 黑种草	HPLC	Asperosaponin VI	at least 2.0 %
<i>Nigella glandulifera</i> Freyn et Sint.	seed	子	HPLC	Hederagenin	at least 0.5 %
<i>Tribulus terrestris</i> L.	fruit	蒺藜	HPLC	(25R)-Spirost-4-en-3,12-dion	at least 1.0 %
<i>Ziziphus jujuba</i> Mill. var. <i>spinosa</i> (Bunge) Hu ex H.F.Chou	seed	酸枣仁 皂苷 A		Jujuboside A	at least 0.030 %

Suppl. Table S8. Medicinal plants referred in European Pharmacopoeia that are standardized by the content of flavonoids.

Plant name	Used part	Method	Analysed substances	Quantitative content
<i>Abelmoschus manihot</i> (L.) Medik.corolla	corolla	HPLC	Hibifolin	at least 1.0 %
<i>Betula pendula</i> Roth and/or <i>Betula pubescens</i> Ehrh. as well as hybrids of both species	leaves	UV-Vis	Total flavonoids, expressed as hyperoside	at least 1.5 %
<i>Calendula officinalis</i> L.	flowers	UV-Vis	Total flavonoids, expressed as hyperoside	at least 0.4 %
<i>Capsella bursa-pastoris</i> (L.) Medik.	flowering and fruit-bearing aerial parts	HPLC	Diosmin	at least 0.2 %
<i>Carthamus tinctorius</i> L.	flower	UV-Vis	Total flavonoids, expressed as hyperoside	at least 1.0 %

<i>Citrus aurantium</i> L. <i>ssp.</i> <i>aurantium</i> (<i>C. aurantium</i> L. <i>ssp.</i> <i>amara</i> Engl.)	flower	UV-Vis	Total flavonoids, expressed as naringin	at least 8.0 %
<i>Citrus reticulata</i> Blanco or its cultivars	epicarp and mesocarp of the ripe fruit	HPLC	Hesperidin	at least 3.5 %
<i>Crataegus monogyna</i> Jacq. (Lindm.), <i>C. laevigata</i> (Poir.) DC. or their hybrids or, more rarely, <i>C.</i> <i>pentagyna</i> Waldst. et Kit. ex Willd. or <i>C. azarolus</i> L.	flower-bearing branches	HPLC	Total vitexin-2''-O-rhamnoside derivatives, expressed as vitexin-2''-O-rhamnoside	at least 0.2 %
<i>Drynaria fortunei</i> (Kunze) J. Sm.	rhizome	HPLC	Naringin	at least 0.5 %
<i>Equisetum arvense</i> L.	aerial parts	UV-Vis	Total flavonoids, expressed as isoquercitroside	at least 0.3 %
<i>Fagopyrum esculentum</i> Moench	aerial parts	HPLC	Rutoside	at least 3.0 %
<i>Ginkgo biloba</i> L.	leaf	HPLC	Total flavonoids, expressed as flavone glycosides	at least 0.5 %
<i>Houttuynia cordata</i> Thunb.	flowering aerial parts	HPLC	Quercitrin	at least 0.1 %
<i>Iris domestica</i> (L.) Goldblatt et Mabb. (syn. <i>Belamcanda</i> <i>chinensis</i> (L.) DC.)	rhizome	HPLC	Irisflorentin	at least 0.10 %
<i>Leonurus cardiaca</i> L.	flowering aerial parts	UV-Vis	Total flavonoids, expressed as hyperoside	at least 0.2 %
<i>Leonurus japonicus</i> Houtt.	aerial parts	UV-Vis	Total flavonoids, expressed as hyperoside	at least 0.2 %
<i>Linaria vulgaris</i> Mill.	flowering aerial parts, sometimes bearing fruit	UV-Vis	Total flavonoids, expressed as hyperoside	at least 0.8 %
<i>Passiflora incarnata</i> L	aerial parts	HPLC	Swertisin chemotype or isovitexin chemotype	

<i>Persicaria orientalis</i> (L.) Spach (syn. <i>Polygonum orientale</i> L.)	fruit	HPLC	Taxifolin	at least 0.15 %
<i>Polygonum aviculare</i> L. s.l.	flowering aerial parts	UV-Vis	Total flavonoids, expressed as hyperoside	at least 0.3 %
<i>Pueraria montana</i> (Lour.) Merr. var. <i>lobata</i> (Willd.) Maesen & S.M.Almeida ex Sanjappa & Predeep (syn. <i>Pueraria lobata</i> (Willd.) Ohwi)	root	HPLC	Total isoflavonoids, expressed as puerarin	at least 6.5 %
<i>Pueraria montana</i> (Lour.) Merr. var. <i>thomsonii</i> (Benth.) M.R.Almeida (syn. <i>Pueraria</i> <i>thomsonii</i> (Benth.))	root	HPLC	Total isoflavonoids, expressed as puerarin	at least 0.4 %
<i>Sambucus nigra</i> L.	flowers	UV-Vis	Total flavonoids, expressed as isoquercitroside	at least 0.8 %
<i>Scutellaria baicalensis</i> Georgi	root without rootlets	HPLC	Baicalin	at least 9.0 %
<i>Silybum marianum</i> L. Gaertn.	fruit	HPLC	Silymarin, expressed as silibinin (<i>flavolignanes</i>)	at least 1.5 %
<i>Solidago gigantea</i> Aiton or <i>Solidago canadensis</i> L., their varieties or hybrids and/or mixtures of these	flowering aerial parts	UV-Vis	Total flavonoids, expressed as hyperoside	at least 2.5 %
<i>Solidago virgaurea</i> L.	flowering aerial parts	UV-Vis	Total flavonoids, expressed as hyperoside	0.5-1.5 %
<i>Styphnolobium japonicum</i> (L.) Schott (syn. <i>Sophora japonica</i> L.)	flower	• UV-Vis • HPLC	• Total flavonoids, expressed as rutoside • Rutoside	• at least 8.0 % • at least 6.0 %
<i>Styphnolobium japonicum</i> (L.) Schott (syn. <i>Sophora japonica</i> L.)	flower bud	• UV-Vis • HPLC	• Total flavonoids, expressed as rutoside • Rutoside	• at least 20.0 % • at least 15.0 %

<i>Typha angustifolia</i> L., <i>Typha orientalis</i> C.Presl or other species of the genus <i>Typha</i> with single pollen grains (monads)	pollen	HPLC	Total flavonoids, expressed as typhaneoside	at least 0.8 %
<i>Viola arvensis</i> Murray and/or <i>Viola tricolor</i> L.	flowering aerial parts	UV-Vis	Total flavonoids, expressed as violanthin	at least 1.5 %
<i>Vitex agnus-castus</i> L.	fruit	HPLC	Casticin	at least 0.08 %

Suppl. Table S9. Medicinal plants referred in European Pharmacopoeia that are standardized by the content of saponins.

Plant name	Used part	Method	Analysed substances	Quantitative content
<i>Actaea racemosa</i> L. (syn. <i>Cimicifuga racemosa</i> (L.) Nutt.)	root	HPLC	total triterpene glycosides, expressed as monoammonium glycyrrhizate	at least 1.0 %
<i>Aesculus hippocastanum</i> L.	seeds		total triterpene glycosides, expressed as protoaescigenin	at least 1.5 %
<i>Astragalus mongholicus</i> Bunge	root	HPLC	astragaloside IV	at least 0.04 %
<i>Bupleurum chinense</i> DC. or <i>Bupleurum scorzonerifolium</i> Willd.	root	HPLC	saikosaponin A	at least 0.16 %
<i>Centella asiatica</i> (L.) Urb.	aerial parts	HPLC	total triterpenoid derivatives, expressed as asiaticoside	at least 6.0 %
<i>Digitalis purpurea</i> L.	leaves	HPLC	total cardenolic glycosides, expressed as digitoxin	at least 0.3 %
<i>Dioscorea nipponica</i> Makino	rhizome with roots	HPLC	diosgenin	at least 1.0 %

	removed			
<i>Glycyrrhiza glabra</i> L. and/or of <i>Glycyrrhiza inflata</i> Bat. and/or <i>Glycyrrhiza uralensis</i> Fisch.	root and stolons	HPLC	18 β -glycyrrhizic acid	at least 4.0 %
<i>Hedera helix</i> L.	leaves	HPLC	hederacoside C	at least 3.0 %
<i>Ophiopogon japonicus</i> (Thunb.) Ker Gawl.	root tuber	UV-Vis	total saponins, expressed as ruscogenin	at least 0.12 %
<i>Panax ginseng</i> C.A.Mey.	root	HPLC	sum of ginsenosides Rg1 and Rb1	at least 0.4 %
<i>Panax notoginseng</i> (Burkill) F.H.Chen [<i>Panax pseudoginseng</i> <i>var. notoginseng</i> (Burkill) G.Hoo & C.L.Tseng]	taproot, without secondary roots	HPLC	sum of ginsenosides Rg1 and Rb1	at least 3.8 %
<i>Pulsatilla chinensis</i> (Bunge) Regel	root and rhizome	HPLC	pulchinoside B4	at least 6.0 %
<i>Quillaja saponaria</i> Molina s.l.	bark, with the cork and underlying parenchyma removed	HPLC	total triterpene glycosides, expressed as quillaia saponin III	at least 6.5 %
<i>Ruscus aculeatus</i> L.	underground parts	HPLC	total saponins, expressed as ruscogenins [mixture of neoruscogenin and ruscogenin]	at least 1.0 %
