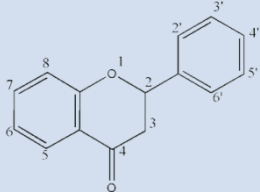
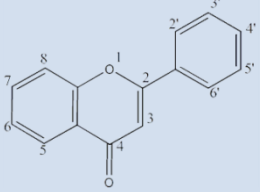
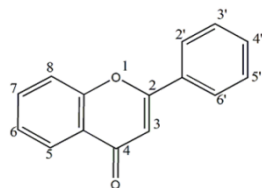


Additional file 1 Flavonoids isolated from *Citrus* species.

compounds	Structure	source	ref.
<i>flavanone and flavanonol</i>			
naringenin	5-OH, 4'-OH, 7-OH	CJ ^a ; CJ ^b ; CG ^a ; CG ^b	[1]
hesperetin	5-OH, 3'-OH, 4'-OH, 7-OCH ₃	CJ ^a ; CJ ^b ; CAF ^d	[1, 2]
narirutin	5-OH, 4'-OH, 7-O-rut.	CSI ^a ; CSI ^b ; CU ^a ; CU ^b ; CLI ^b ; CP ^b ; CSU ^b ; CR ^a ; CR ^b ; CCL ^a ; CAT ^d	[3, 4, 5, 6, 7]
naringin	5-OH, 4'-OH, 7-O-neo.	CAT ^a ; CAT ^d ; CJ ^a ; CJ ^b ; CU ^a ; CU ^b ; CG ^a ; CG ^b ; CG ^e ; CP ^b ; CR ^d ; CAT ^a	[3, 5, 8, 9, 10]
naringenin-7-O-rutinoside-4'-O-glucoside	5-OH, 7-O-rut., 4'-O-glu.	CSI ^b ; CR ^b ; CU ^b ; CP ^b ; CAT ^d	[3, 5]
naringenin-7-O-neohesperidoside-4'-O-glucoside	5-OH, 7-O-neo., 4'-O-glu.	CP ^b	[3, 5]
naringin dehydrated hexoside	5-OH, 4'-O-dih., 7-O-neo.	CAT ^a	[11]
hesperidin	5-OH, 3'-OH, 4'-OCH ₃ , 7-O-rut.	CR ^a ; CR ^b ; CR ^d ; CCL ^a ; CU ^a ; CU ^b ; CSI ^a ; CSI ^b ; CLI ^b ; CP ^b ; CSU ^a ; CSU ^b ; CMI ^a ; CMI ^b ; CME ^a ; CME ^b ; CHY ^a ; CHY ^b ; CLE ^a ; CAT ^a ; CAT ^d ; CE ^a ; CJ ^a ; CJ ^b ; CG ^a ; CG ^b ; CG ^e ; CAF ^d	[1, 2, 3, 4, 6, 7, 8, 10]
neohesperidin	5-OH, 3'-OH, 4'-OCH ₃ , 7-O-neo.	CP ^b ; CMI ^a ; CMI ^b ; CME ^a ; CME ^b ; CHY ^a ; CHY ^b ; CJ ^b ; CU ^a ; CU ^b ; CG ^a ; CG ^b ; CG ^e ; CAT ^d ; CAT ^a	[1, 3, 5, 9, 10]
hesperidin dehydrated hexoside	5-OH, 4'-OCH ₃ , 3'-dih., 7-O-rut.	CAT ^a	[8]
eriocitrin	5-OH, 3'-OH, 4'-OH, 7-O-rut.	CSI ^b ; CR ^b ; CU ^b ; CLI ^b ; CME ^a ; CME ^b ; CHY ^b ; CAT ^d	[3, 5, 10]
neoeriocitrin	5-OH, 3'-OH, 4'-OH, 7-neo.	CHY ^b ; CAT ^d ; CAT ^a	[5, 9, 10]

eriodictyol-7-O-rutinoside-4'-O-glucoside	5-OH, 3'-OH, 4'-O-glu., 7-O-rut.	CLI ^b	[3]
didymin	5-OH, 4'-OCH ₃ , 7-O-rut.	CSI ^a ; CSI ^b ; CU ^a ; CU ^b ; CLI ^b ; CP ^b CSU ^a ; CSU ^b ; CR ^a ; CR ^b ; CCL ^a ; CAF ^d	[3, 6, 10, 12]
poncirin	5-OH, 4'-OCH ₃ , 7-O-neo.	CP ^b ; CAT ^a ; CR ^a ; CR ^b	[3, 11, 13]
<i>flavone and flavonol</i>			
			
luteolin	5-OH, 4'-OH, 5'-OH, 7-OH	CJ ^a ; CJ ^b ; CU ^a ; CU ^b ; CG ^a ; CG ^b	[1]
apigenin	5-OH, 4'-OH, 7-OH	CAT ^d	[10]
quercetin	3-OH, 5-OH, 7-OH, 4'-OH, 5'-OH	CR ^d ; CAT ^d	[10]
luteolin-7-O -rutinoside	5-OH, 4'-OH, 5'-OH, 7-O-rut.	CR ^b ; CU ^b ; CLI ^b	[3]
luteolin-7-O-neohesperidoside	5-OH, 4'-OH, 5'-OH, 7-O- neo.	CAT ^a	[9]
luteolin-6,8-di-C -glucoside	5-OH, 4'-OH, 5'-OH, 7-OH, 6-C-glu., 8-C-glu.	CSI ^b ; CLI ^b ; CAT ^d	[3, 5]
luteolin-7-O-neohesperidopode-4'-O-glucoside	5-OH, 4'-O-glu.e, 5'-OH, 7-O-neo.	CP ^b	[3]
apigenin-7-O -rutinoside	5-OH, 4'-OH, 7-O-rut.	CR ^b ; CU ^b ; CLI ^b	[3]
apigenin-7-O-neohesperidoside	5-OH, 4'-OH, 7-O-neo.	CP ^b ; CAT ^d	[3, 5]
apigenin-6,8-di-C-glucoside	5-OH, 4'-OH, 7-OH, 6-C-glu., 8-C-glu.	CSI ^b ; CR ^b ; CU ^b ; CLI ^b ; CP ^b ; CSU ^a ; CSU ^b ; CMI ^b ; CAT ^d ; CAT ^a	[3, 4, 5, 9]
apigenin-8-C-glucosyl-2''-O-rhamnoside	5-OH, 4'-OH, 7-OH, 8-C-glu., -2''-O-rha.	CMI ^a ; CMI ^b	[4]
apigenin-7-O-rutinoside-4'-O-glucoside	5-OH; 4'- O-glu., 7-O -rut.	CLI ^b	[3]
apigenin-7-O-neohesperidoside-4'-glucoside	5-OH, 4'-O-glu., 7-O- neo.	CAT ^a	[9]
chrysoeriol-7-O-rutinoside	5-OH, 4'-OH, 5'-OCH ₃ , 7-O-rut.	CR ^b ; CU ^b ; CLI ^b	[3]
chrysoeriol-6,8-di-C-glucoside	5-OH, 4'-OH, 5'-OCH ₃ , 7-OH, 6-C-glu., 8-C-glu.	CLI ^b ; CSU ^a	[3, 4]

diosmin	5-OH, 3'-OH, 4'-OCH ₃ , 7-O-rut.	CR ^b ; CU ^a ; CU ^b ; CLI ^b ; CME ^a ; CME ^b ; CHY ^a ; CCL ^a ; CSI ^a	[3, 4, 6]
diosmetin-8-C -glucoside	5-OH, 3'-OH, 4'-OCH ₃ , 7-OH, 8-C-glu.	CR ^b ; CU ^b ; CLI ^b	[3]
diosmetin-6- C-glucoside	5-OH, 3'-OH, 4'-OCH ₃ , 7-OH, 6-C-glu.	CR ^b ; CU ^b ; CLI ^b ; CME ^b	[3, 4]
diosmetin-6,8-di-C-glucoside	5-OH, 3'-OH, 4'-OCH ₃ , 7-OH, 6-C-glu., 8-C-glu.	CR ^b ; CU ^b ; CLI ^b ; CSU ^a ; CME ^a ; CME ^b ; CAT ^a	[3, 4, 9]
rutin	3-O-rut., 5-OH, 7-OH, 4'-OH, 5'-OH	CSI ^b ; CR ^b ; CR ^d ; CU ^b ; CLI ^b ; CAT ^d ; CAF ^d	[3, 10, 12]
quercetin-7-O -rutinoside	3-OH, 5-OH, 7-O-rut., 4'-OH, 5'-OH	CSI ^b ; CR ^b ; CU ^b ; CLI ^b ; CP ^b	[3]
isorhamnetin-3-O-rutinoside	5-OH, 3-O-rut., 7-OH, 4'-OH, 5'-OCH ₃	CSI ^b ; CR ^b ; CU ^b ; CLI ^b	[3]
isorhamnetin-7-O-rutinoside	5-OH, 3-OH, 7-O-rut, 4'-OH, 5'-OCH ₃	CSI ^b ; CLI ^b	[3]
tamarixetin-7-O -rutinoside	3-OH, 5-OH, 4'-OCH ₃ , 5-OH, 7-O -rut.	CR ^b ; CU ^b	[3]
kaempferol-3-O -rutinoside	5-OH, 3-O-rut., 7-OH, 4'-OH	CSI ^b ; CR ^b ; CU ^b	[3]
kaempferol	5-OH, 3-O-glu., 7-O-glu. 4'-OH	CAT ^d	[10]



Polymethoxylated flavones

sinensetin	5-OCH ₃ , 6-OCH ₃ , 7-OCH ₃ , 4'-OCH ₃ , 5'-OCH ₃	CAT ^a ; CE ^a ; CCL ^a ; CU ^a ; CSI ^a ; CR ^a ; CR ^b ; CLM ^a ; CSI ^a ; CTR ^a ; CU ^a ; CK ^a ; CTB ^a	[6, 7, 11, 14]
isosinensetin	3'-OCH ₃ , 4'-OCH ₃ , 5-OCH ₃ , 7-OCH ₃ , 8-OCH ₃	CLE ^a ; CE ^a	[11]
nobiletin	3'-OCH ₃ , 4'-OCH ₃ , 3-OCH ₃ , 5-OCH ₃ , 6-OCH ₃ , 7-OCH ₃	CLE ^a ; CAT ^a ; CE ^a ; CCL ^a ; CU ^a ; CSI ^a ; CR ^a ; CR ^d ; CP ^a ; CP ^c ; CHA ^a ; CSI ^a ; CTR ^a ; CK ^a ; CTB ^a	[6, 7, 9, 11, 14]
tangeretin	5-OH, 6-OCH ₃ , 7-OCH ₃ , 8-OCH ₃ , 4'-OCH ₃	CLE ^a ; CAT ^a ; CE ^a ; CCL ^a ; CU ^a ; CSI ^a ; CR ^a ; CR ^b ; CHA ^a ; CSI ^a ; CTR ^a ; CU ^a ; CK ^a ; CTB ^a ;	[6, 7, 9, 11, 14]
3,5,6,7,8,3',4'-heptamethoxyflavone	3-OCH ₃ , 5-OCH ₃ , 6-OCH ₃ , 7-OCH ₃ ,	CHA ^a ; CSI ^a ; CTR ^a ; CU ^a ; CK ^a ; CTB ^a ; CLE ^a ; CP ^a ; CP ^c	[14]

	8-OCH ₃ , 3'-OCH ₃ , 4'-OCH ₃	
5-hydroxy-6,7,8,3',4'-pentamethoxyflavone	5-OH, 6-OCH ₃ , 7-OCH ₃ , 8-OCH ₃ , 3'-OCH ₃ , 4'-OCH ₃	CLM ^a ; CHA ^a ; CCA ^a ; CSI ^a ; CU ^a ; CK ^a ; CTB ^a ; CLE ^a [14]
5,7,8,3',4'-pentamethoxyflavone	5-OCH ₃ , 7-OCH ₃ , 8-OCH ₃ , 3'-OCH ₃ , 4'-OCH ₃	CSI ^a ; CTR ^a ; CU ^a ; CK ^a ; CTB ^a ; CLE ^a [14]

dih: dihydratedhexoside; glu: glucoside; glul: glucosyl; rha: rhamnoside; rut: rutinoside; neo: neohesperidoside; ^a: peel; ^b: pulp; ^c: pressed oil; ^d: juice; ^e: whole fruit.; CAF: *C. aurantifolia*; CAT: *C. aurantium*; CCA: *C. canaliculata*; CCL: *C. clementina*; CE: *C. erythrosa*; CG: *C. grandis*; CHA: *C. hassaku*; CHY: *C. hystrix*; CJ: *C. junos*; CK: *C. kinokuni*; CLE: *C. leiocarpa*; CLI: *C. limon*; CLM: *C. limonimeditica*; CME: *C. medica*; CMI: *C. microcarpa*; CP: *C. paradisi*; CR: *C. reticulata*; CSI: *C. sinensis*; CSU: *C. suhuiensis*; CTB: *C. tachibana*; CTR: *C. tamurana*; CU: *C. unshiu*.

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