

Table S1 Polyphenols of HFL samples determined by UPLC-MS/MS.

Compounds	CAS	Formula	Ionization model	Peak area
<b>Alkaloids</b>				
Piperidine	110-89-4	C5H11N	[M+H] <sup>+</sup>	2.08E+06
Putrescine	110-60-1	C4H12N2	[M+H] <sup>+</sup>	7.34E+04
L-Azetidine-2-carboxylic acid	2133-34-8	C4H7NO2	[M+H] <sup>+</sup>	2.93E+05
Cadaverine	462-94-2	C5H14N2	[M+H] <sup>+</sup>	6.32E+04
Choline	62-49-7	C5H14NO <sup>+</sup>	[M] <sup>+</sup>	1.68E+06
Diethanolamine	111-42-2	C4H11NO2	[M+H] <sup>+</sup>	3.13E+04
Histamine	51-45-6	C5H9N3	[M+H] <sup>+</sup>	2.16E+04
N-Benzylmethylene isomethylamine	-	C8H9N	[M+H] <sup>+</sup>	1.84E+06
2-Phenylethylamine	156-28-5	C8H11N	[M+H] <sup>+</sup>	1.63E+06
N-Acetylputrescine	18233-70-0	C6H14N2O	[M+H] <sup>+</sup>	2.66E+04
Agmatine	306-60-5	C5H14N4	[M+H] <sup>+</sup>	2.46E+04
N-benzylformamide	6343-54-0	C8H9NO	[M+H] <sup>+</sup>	1.26E+05
6-Methylnicotinamide	6960-22-1	C7H8N2O	[M+H] <sup>+</sup>	6.15E+04
L-Tyramine	51-67-2	C8H11NO	[M+H] <sup>+</sup>	6.75E+05
6-Hydroxynicotinic acid	5006-66-6	C6H5NO3	[M+H] <sup>+</sup>	1.38E+05
O-Phosphorylethanolamine	1071-23-4	C2H8NO4P	[M-H] <sup>-</sup>	7.32E+04
Histidinol	501-28-0	C6H11N3O	[M+H] <sup>+</sup>	2.77E+07
N-Acetylcadaverine	32343-73-0	C7H16N2O	[M+H] <sup>+</sup>	9.01E+05
Indole-3-carboxaldehyde	487-89-8	C9H7NO	[M+H] <sup>+</sup>	3.24E+04
Dopamine	51-61-6	C8H11NO2	[M+H] <sup>+</sup>	1.24E+05
4,6-Dihydroxyquinoline	3517-61-1	C9H7NO2	[M+H] <sup>+</sup>	3.51E+04
Indole-3-carboxylic acid	771-50-6	C9H7NO2	[M-H] <sup>-</sup>	1.06E+04
DL-2-Aminoadipic acid	542-32-5	C6H11NO4	[M+H] <sup>+</sup>	1.17E+05
Indole-3-acetic acid (IAA)	87-51-4	C10H9NO2	[M+H] <sup>+</sup>	1.25E+04
3-Indoleacrylic acid	1204-06-4	C11H9NO2	[M+H] <sup>+</sup>	1.73E+06
N-(4-Aminobutyl)benzamide	5692-23-9	C11H16N2O	[M+H] <sup>+</sup>	7.94E+04
Spermine	71-44-3	C10H26N4	[M+H] <sup>+</sup>	2.62E+07
O-Acetyl-L-carnitine	3040-38-8	C9H17NO4	[M+H] <sup>+</sup>	2.20E+05
1-Methoxy-indole-3-acetamide	-	C11H12N2O2	[M+H] <sup>+</sup>	4.40E+06

Methoxyindoleacetic acid	3471-31-6	C11H11NO3	[M+H] <sup>+</sup>	6.81E+04
Methyl dioxindole-3-acetate	57061-18-4	C11H11NO4	[M+H] <sup>+</sup>	8.54E+04
N-Caffeoylputrescine	29554-26-5	C13H18N2O3	[M+H] <sup>+</sup>	2.67E+05
N-Feruloylputrescine	501-13-3	C14H20N2O3	[M+H] <sup>+</sup>	9.86E+04
Stearamide	124-26-5	C18H37NO	[M+H] <sup>+</sup>	1.57E+05
Nicotianamine	34441-14-0	C12H21N3O6	[M+H] <sup>+</sup>	1.88E+04
N-Oleylethanolamine	111-58-0	C20H39NO2	[M+H] <sup>+</sup>	7.99E+04
10-Formyltetrahydrofolic Acid	2800-34-2	C20H23N7O7	[M+H] <sup>+</sup>	1.05E+05
N1,N8-Bis(sinapoyl)spermidine	-	C29H39N3O8	[M+H] <sup>+</sup>	3.93E+06
<b>Flavonoids</b>				
3',4',7-Trihydroxyflavone	2150-11-0	C15H10O5	[M+H] <sup>+</sup>	9.00E+00
Naringenin (5,7,4'-Trihydroxyflavanone)	480-41-1	C15H12O5	[M-H] <sup>-</sup>	1.92E+04
Phloretin	60-82-2	C15H14O5	[M-H] <sup>-</sup>	8.18E+05
Epiafzelechin	24808-04-6	C15H14O5	[M+H] <sup>+</sup>	2.68E+04
Kaempferol (3,5,7,4'-Tetrahydroxyflavone)	520-18-3	C15H10O6	[M+H] <sup>+</sup>	1.08E+04
Luteolin (5,7,3',4'-Tetrahydroxyflavone)	491-70-3	C15H10O6	[M-H] <sup>-</sup>	2.48E+04
Eriodictyol (5,7,3',4'-Tetrahydroxyflavanone)	552-58-9	C15H12O6	[M-H] <sup>-</sup>	1.12E+05
Epicatechin	490-46-0	C15H14O6	[M+H] <sup>+</sup>	3.30E+06
4'-Hydroxy-5,7-dimethoxyflavanone	-	C17H16O5	[M-H] <sup>-</sup>	1.57E+07
6-Hydroxyluteolin	18003-33-3	C15H10O7	[M-H] <sup>-</sup>	1.05E+05
Morin	480-16-0	C15H10O7	[M-H] <sup>-</sup>	8.27E+06
Quercetin	117-39-5	C15H10O7	[M+H] <sup>+</sup>	5.79E+05
Dihydrokaempferide	137225-59-3	C16H14O6	[M+H] <sup>+</sup>	2.41E+05
Taxifolin(Dihydroquercetin)	480-18-2	C15H12O7	[M-H] <sup>-</sup>	1.26E+05
3'-O-Methyl-epicatechin	76549-34-3	C16H16O6	[M+H] <sup>+</sup>	9.00E+00
Epigallocatechin	970-74-1	C15H14O7	[M-H] <sup>-</sup>	3.79E+04
Gallocatechin	970-73-0	C15H14O7	[M+H] <sup>+</sup>	4.68E+05
Dihydromyricetin (Ampelopsin)	27200-12-0	C15H12O8	[M-H] <sup>-</sup>	2.49E+04
Pinnatifinoside A	-	C21H18O9	[M+H] <sup>+</sup>	5.24E+04
Apigenin-6-C-rhamnoside	-	C21H20O9	[M+H] <sup>+</sup>	3.67E+04
Apigenin-4'-O-glucoside*	-	C21H20O10	[M+H] <sup>+</sup>	1.01E+04
Apigenin-6-C-glucoside (Isovitexin)	38953-85-4	C21H20O10	[M-H] <sup>-</sup>	3.41E+05
Apigenin-7-O-glucoside(Cosmosiin)*	578-74-5	C21H20O10	[M+H] <sup>+</sup>	1.01E+04
Kaempferol-3-O-rhamnoside (Afzelin)(Kaempferin)	482-39-3	C21H20O10	[M-H] <sup>-</sup>	1.77E+05

Quercetin-3-O-xyloside (Reynoutrin)*	549-32-6	C20H18O11	[M+H] <sup>+</sup>	4.91E+06
Morin-3-O-lyxoside*	-	C20H18O11	[M-H] <sup>-</sup>	3.45E+06
Avicularin(Quercetin-3-O- $\alpha$ -L-arabinofuranoside)*	572-30-5	C20H18O11	[M+H] <sup>+</sup>	4.27E+06
Morin-3-O-arabinoside*	-	C20H18O11	[M-H] <sup>-</sup>	3.57E+06
Naringenin-6-C-Glucoside	3682-03-9	C21H22O10	[M+H] <sup>+</sup>	9.61E+04
Dihydrocharcone-4'-O-glucoside	-	C21H24O10	[M-H] <sup>-</sup>	8.38E+05
Phloretin-4'-O-glucoside (Trilobatin)	4192-90-9	C21H24O10	[M-H] <sup>-</sup>	8.60E+06
Epicatechin gallate	1257-08-5	C22H18O10	[M+H] <sup>+</sup>	1.95E+04
Isorhamnetin-3-O-arabinoside	-	C21H20O11	[M+H] <sup>+</sup>	2.66E+04
Kaempferol-3-O-glucoside (Astragaln)*	480-10-4	C21H20O11	[M+H] <sup>+</sup>	8.89E+06
Luteolin-3'-O-glucoside*	5154-41-6	C21H20O11	[M+H] <sup>+</sup>	1.04E+07
Kaempferol-4'-O-glucoside*	-	C21H20O11	[M+H] <sup>+</sup>	6.82E+05
Quercetin-3-O-rhamnoside(Quercitrin)	522-12-3	C21H20O11	[M+H] <sup>+</sup>	5.45E+05
Luteolin-8-C-glucoside (Orientin)	28608-75-5	C21H20O11	[M+H] <sup>+</sup>	1.14E+05
Luteolin-4'-O-glucoside*	6920-38-3	C21H20O11	[M+H] <sup>+</sup>	7.40E+06
Luteolin-6-C-glucoside (Isoorientin)	4261-42-1	C21H20O11	[M+H] <sup>+</sup>	9.06E+04
Dihydrokaempferol-7-O-glucoside	-	C21H22O11	[M-H] <sup>-</sup>	1.84E+05
Eriodictyol-3'-O-glucoside	-	C21H22O11	[M-H] <sup>-</sup>	3.89E+05
Dihydrokaempferol-3-O-glucoside	1049-08-8	C21H22O11	[M+H] <sup>+</sup>	7.87E+04
Taxifolin-3-O-rhamnoside (Astilbin)	29838-67-3	C21H22O11	[M-H] <sup>-</sup>	5.35E+04
Cinchonain Ib	85081-24-9	C24H20O9	[M+H] <sup>+</sup>	2.22E+06
Cinchonain Id	85022-67-9	C24H20O9	[M-H] <sup>-</sup>	2.81E+06
Cinchonain Ia	85022-69-1	C24H20O9	[M+H] <sup>+</sup>	2.18E+06
Epicatechin glucoside	-	C21H24O11	[M-H] <sup>-</sup>	1.98E+06
Epicatechin-3'-O- $\beta$ -D-glucopyranoside	-	C21H24O11	[M-H] <sup>-</sup>	1.35E+06
Epicatechin-3-(3''-O-methyl)gallate	-	C23H20O10	[M-H] <sup>-</sup>	6.14E+04
Gallocatechin gallate	4233-96-9	C22H18O11	[M+H] <sup>+</sup>	1.62E+04
Epigallocatechin-3-gallate	989-51-5	C22H18O11	[M+H] <sup>+</sup>	1.62E+04
Luteolin-7-O-glucuronide	29741-10-4	C21H18O12	[M+H] <sup>+</sup>	3.37E+05
Quercetin-3-O-glucoside (Isoquercitrin)*	482-35-9	C21H20O12	[M-H] <sup>-</sup>	4.87E+06
Rhodiogin	94696-39-6	C21H20O12	[M+H] <sup>+</sup>	1.03E+06
Isohyperoside*	35589-21-0	C21H20O12	[M+H] <sup>+</sup>	6.45E+06
Quercetin-5-O- $\beta$ -D-glucoside	-	C21H20O12	[M+H] <sup>+</sup>	5.61E+06
Quercetin-4'-O-glucoside (Spiraeoside)	20229-56-5	C21H20O12	[M-H] <sup>-</sup>	3.86E+07

Quercetin-7-O-glucoside*	491-50-9	C21H20O12	[M-H]-	7.72E+06
6-Hydroxyluteolin 5-glucoside	-	C21H20O12	[M-H]-	7.72E+06
Quercetin-3-O-galactoside (Hyperin)*	482-36-0	C21H20O12	[M+H]+	5.81E+06
Taxifolin-3'-O-glucoside	31106-05-5	C21H22O12	[M-H]-	1.05E+05
Galloylisorhamnetin	-	C23H16O11	[M+H]+	4.55E+04
Isorhamnetin-3-O-gallate	-	C23H16O11	[M+H]+	4.28E+04
Quercetin-4'-O-glucuronide	201463-36-7	C21H18O13	[M-H]-	5.72E+05
Isorhamnetin-7-O-glucoside (Brassicin)*	6743-96-0	C22H22O12	[M+H]+	1.49E+06
Rhamnetin-3-O-Glucoside	27875-34-9	C22H22O12	[M+H]+	1.53E+06
Isorhamnetin-3-O-Glucoside*	5041-82-7	C22H22O12	[M+H]+	1.63E+06
Quercetagenin-7-O-glucoside(Quercetagenin)	548-75-4	C21H20O13	[M+H]+	9.16E+04
3',5',5,7-Tetrahydroxy-4'-methoxyflavanone-3'-O-glucoside	-	C22H24O12	[M+H]+	6.63E+04
Kaempferol-3-O-(6''-acetyl)glucoside	-	C23H22O12	[M-H]-	3.14E+05
Quercetin-3-O-(6''-O-acetyl)glucoside	-	C23H22O13	[M+H]+	1.73E+05
Quercetin-3-O-(6''-O-acetyl)galactoside	-	C23H22O13	[M-H]-	2.18E+06
Kaempferol-3-O-(6''-malonyl)galactoside*	-	C24H22O14	[M+H]+	1.57E+06
Kaempferol-3-O-(6''-malonyl)glucoside*	-	C24H22O14	[M+H]+	1.59E+06
Quercetin-7-O-(6''-malonyl)glucoside	-	C24H22O15	[M+H]+	9.70E+06
Epicatechin-epiafzelechin	-	C30H26O11	[M-H]-	2.94E+05
Isorhamnetin-3-O-(6''-malonyl)glucoside	-	C25H24O15	[M+H]+	1.68E+05
Myricetin-3-O-(6''-malonyl)glucoside	-	C24H22O16	[M+H]+	7.45E+03
Apigenin-7-O-rutinoside (Isorhoifolin)	552-57-8	C27H30O14	[M+H]+	2.38E+06
Isovitexin-2''-O-rhamnoside	-	C27H30O14	[M+H]+	1.99E+05
Vitexin-2''-O-rhamnoside	64820-99-1	C27H30O14	[M+H]+	4.17E+06
Kaempferol-3,7-O-dirhamnoside (Kaempferitrin)	482-38-2	C27H30O14	[M+H]+	4.83E+06
Epitheflavic acid-3-O-Gallate	34218-97-8	C28H20O14	[M-H]-	3.36E+06
Kaempferol-3-O-sambubioside	27661-51-4	C26H28O15	[M+H]+	9.67E+04
Luteolin-7-O-glucoside-5-O-arabinoside	-	C26H28O15	[M+H]+	1.56E+04
Naringenin-7-O-Neohesperidoside(Naringin)	10236-47-2	C27H32O14	[M-H]-	2.86E+04
Naringenin-7-O-Rutinoside(Narirutin)	14259-46-2	C27H32O14	[M+H]+	5.90E+04
8,8'-Methylenebiscatechin	81555-08-0	C31H28O12	[M+H]+	1.45E+06
7,3'-Di-O-gallyoltricitiflavan	-	C29H22O14	[M-H]-	5.91E+04
7,4'-Di-O-gallyoltricitiflavan	-	C29H22O14	[M-H]-	5.34E+04

Kaempferol-3-O-rutinoside(Nicotiflorin)	17650-84-9	C27H30O15	[M+H] <sup>+</sup>	2.35E+05
Vitexin-2''-O-galactoside	-	C27H30O15	[M+H] <sup>+</sup>	4.95E+05
Kaempferol-3-O-glucorhamnoside	40437-72-7	C27H30O15	[M+H] <sup>+</sup>	2.48E+05
Apigenin-6,8-di-C-glucoside (Vicenin-2)	23666-13-9	C27H30O15	[M+H] <sup>+</sup>	3.08E+05
Kaempferol-3-O-glucoside-7-O-rhamnoside	-	C27H30O15	[M+H] <sup>+</sup>	2.73E+05
Vitexin-2''-O-glucoside	61360-94-9	C27H30O15	[M+H] <sup>+</sup>	9.55E+04
Luteolin-7-O-neohesperidoside (Lonicerin)	25694-72-8	C27H30O15	[M+H] <sup>+</sup>	2.61E+05
Kaempferol-3-O-neohesperidoside	32602-81-6	C27H30O15	[M+H] <sup>+</sup>	2.54E+05
Kaempferol-3-O-rhamnosyl(1→2)glucoside	-	C27H30O15	[M+H] <sup>+</sup>	2.82E+04
Luteolin-6-C-glucoside-7-O-rhamnoside	-	C27H30O15	[M+H] <sup>+</sup>	2.94E+04
Isosaponarin(Isovitexin-4'-O-glucoside)	19416-87-6	C27H30O15	[M+H] <sup>+</sup>	1.15E+05
Cyanidin-3-O-(6''-O-p-Coumaroyl)glucoside	-	C30H27O13+	[M] <sup>+</sup>	7.01E+04
Quercetin-3-O-sambubioside	83048-35-5	C26H28O16	[M+H] <sup>+</sup>	5.09E+04
Kaempferol-3-O-(6''-galloyl)glucoside	56317-05-6	C28H24O15	[M+H] <sup>+</sup>	3.31E+04
Kaempferol-3-O-(6''-galloyl)galactoside	-	C28H24O15	[M+H] <sup>+</sup>	1.06E+05
Gallocatechin-(4α→8)-gallocatechin	-	C30H26O14	[M+H] <sup>+</sup>	1.32E+05
Quercetin-3-O-rutinoside (Rutin)*	153-18-4	C27H30O16	[M+H] <sup>+</sup>	7.08E+06
Luteolin-7-O-gentiobioside	-	C27H30O16	[M+H] <sup>+</sup>	1.38E+05
Quercetin-3-O-glucoside-7-O-rhamnoside	-	C27H30O16	[M+H] <sup>+</sup>	7.82E+06
Rhodionidin	-	C27H30O16	[M+H] <sup>+</sup>	2.26E+06
Luteolin-6,8-di-C-glucoside	29428-58-8	C27H30O16	[M+H] <sup>+</sup>	5.44E+04
Quercetin-3-O-robinobioside	52525-35-6	C27H30O16	[M-H] <sup>-</sup>	8.26E+06
Quercetin-7-O-rutinoside*	147714-62-3	C27H30O16	[M+H] <sup>+</sup>	8.77E+06
Kaempferol-3,7-O-diglucoside	25615-14-9	C27H30O16	[M+H] <sup>+</sup>	1.38E+05
Luteolin-7,3'-di-O-glucoside	52187-80-1	C27H30O16	[M+H] <sup>+</sup>	2.97E+04
Quercetin-3-O-neohesperidoside	117611-67-3	C27H30O16	[M+H] <sup>+</sup>	2.09E+06
Isoluteolin-6,8-di-C-glucoside	-	C27H30O16	[M+H] <sup>+</sup>	1.67E+04
Kaempferol-6,8-di-C-glucoside	-	C27H30O16	[M+H] <sup>+</sup>	1.23E+04
Isorhamnetin-3-O-rutinoside (Narcissin)	604-80-8	C28H32O16	[M+H] <sup>+</sup>	1.84E+05
Sexangularetin-3-O-glucoside-7-O-rhamnoside	-	C28H32O16	[M+H] <sup>+</sup>	2.01E+05
Isorhamnetin-3-O-glucoside-7-O-rhamnoside	-	C28H32O16	[M+H] <sup>+</sup>	1.15E+04
Quercetin-3-O-sophoroside (Baimaside)	18609-17-1	C27H30O17	[M+H] <sup>+</sup>	2.23E+06
6-Hydroxykaempferol-3,6-O-Diglucoside	-	C27H30O17	[M+H] <sup>+</sup>	2.20E+06
6-Hydroxykaempferol-7,6-O-Diglucoside	-	C27H30O17	[M+H] <sup>+</sup>	1.23E+06

Quercetin-3,7-Di-O-glucoside	-	C27H30O17	[M+H] <sup>+</sup>	2.52E+05
Luteolin-7-O-(6''-malonyl)glucoside-5-O-arabinoside	-	C29H30O18	[M+H] <sup>+</sup>	6.48E+03
Kaempferol-3-O-rutinoside-7-O-rhamnoside	-	C33H40O19	[M+H] <sup>+</sup>	6.09E+04
Quercetin-3-O-rutinoside-7-O-rhamnoside	-	C33H40O20	[M+H] <sup>+</sup>	3.27E+04
Quercetin-3-O-(2''-O-Rhamnosyl)rutinoside	55696-57-6	C33H40O20	[M+H] <sup>+</sup>	5.18E+06
Quercetin-3-O-sophoroside-7-O-rhamnoside	-	C33H40O21	[M+H] <sup>+</sup>	1.55E+04
Quercetin-7-O-rutinoside-4'-O-glucoside	-	C33H40O21	[M+H] <sup>+</sup>	3.68E+04
Quercetin-3-O-rutinoside-7-O-glucoside	-	C33H40O21	[M+H] <sup>+</sup>	6.07E+04
Cyanidin-3-O-(6''-O-feruloyl)glucoside-5-O-glucoside	-	C37H39O19+	[M] <sup>+</sup>	9.00E+00
Catechin-catechin-catechin	-	C45H38O18	[M-H] <sup>-</sup>	1.60E+06
<b>Phenolic acids</b>				
Benzamide	55-21-0	C7H7NO	[M+H] <sup>+</sup>	4.88E+05
4-Hydroxybenzaldehyde	123-08-0	C7H6O2	[M-H] <sup>-</sup>	2.43E+05
2-Phenylethanol	60-12-8	C8H10O	[M-H <sub>2</sub> O+H] <sup>+</sup>	6.54E+05
1,3,5-Benzenetriol	108-73-6	C6H6O3	[M+H] <sup>+</sup>	2.77E+06
4-Hydroxyacetophenone	99-93-4	C8H8O2	[M-H] <sup>-</sup>	2.16E+04
Phenyl acetate	122-79-2	C8H8O2	[M-H] <sup>-</sup>	2.51E+04
4-Hydroxybenzoic acid	99-96-7	C7H6O3	[M-H] <sup>-</sup>	3.68E+05
Salicylic acid	69-72-7	C7H6O3	[M-H] <sup>-</sup>	2.16E+05
Tyrosol; 4-Hydroxyphenylethanol	501-94-0	C8H10O2	[M-H] <sup>-</sup>	2.73E+04
4-Nitrophenol	100-02-7	C6H5NO3	[M+H] <sup>+</sup>	8.58E+06
1-Naphthol*	90-15-3	C10H8O	[M-H] <sup>-</sup>	3.34E+04
2-Naphthol*	135-19-3	C10H8O	[M-H] <sup>-</sup>	3.64E+04
Phthalic anhydride	85-44-9	C8H4O3	[M+H] <sup>+</sup>	9.83E+05
Cinnamic acid	140-10-3	C9H8O2	[M-H] <sup>-</sup>	6.41E+03
2-Methoxy-4-ethenylphenol	7786-61-0	C9H10O2	[M+H] <sup>+</sup>	1.43E+05
4'-Hydroxypropiophenone	70-70-2	C9H10O2	[M-H] <sup>-</sup>	1.51E+04
4-Allylcatechol	1126-61-0	C9H10O2	[M-H] <sup>-</sup>	9.08E+03
p-Coumaryl alcohol	3690-05-9	C9H10O2	[M-H] <sup>-</sup>	4.39E+05
3-Methoxybenzoic acid	586-38-9	C8H8O3	[M-H] <sup>-</sup>	1.69E+04
Methyl 4-hydroxybenzoate	99-76-3	C8H8O3	[M-H] <sup>-</sup>	2.86E+04
Isovanillin	621-59-0	C8H8O3	[M+H] <sup>+</sup>	7.91E+04
2,3-Dihydroxybenzoic Acid*	303-38-8	C7H6O4	[M-H] <sup>-</sup>	7.35E+06
3,4-Dihydroxybenzoic acid (Protocatechuic acid)*	99-50-3	C7H6O4	[M-H] <sup>-</sup>	7.39E+06

2,5-Dihydroxybenzoic acid; Gentisic Acid*	490-79-9	C7H6O4	[M-H]-	3.72E+06
3,4-dihydroxy phenylethanol	-	C8H10O3	[M+H]+	1.81E+04
4-Methoxycinnamaldehyde	1963-36-6	C10H10O2	[M+H]+	5.31E+04
Caffeic aldehyde	141632-15-7	C9H8O3	[M+H]+	2.66E+05
p-Coumaric acid	501-98-4	C9H8O3	[M+H]+	2.33E+05
3-Hydroxycinnamic Acid	14755-02-3	C9H8O3	[M-H]-	5.47E+05
2-(Formylamino)benzoic acid	3342-77-6	C8H7NO3	[M-H]-	1.68E+05
5,7-Dihydroxy-1(3H)-isobenzofuranone	27979-58-4	C8H6O4	[M-H]-	1.69E+06
Terephthalic acid	100-21-0	C8H6O4	[M-H]-	1.69E+06
3-(4-Hydroxyphenyl)-propionic acid	501-97-3	C9H10O3	[M-H]-	1.34E+04
2,3-Dimethoxybenzaldehyde	86-51-1	C9H10O3	[M+H]+	8.28E+03
2,6-Dimethoxybenzaldehyde	3392-97-0	C9H10O3	[M-H]-	1.34E+04
Ethylparaben	120-47-8	C9H10O3	[M-H]-	1.45E+04
1-(4-Methoxyphenyl)-1-propanol	5349-60-0	C10H14O2	[M-H]-	7.59E+04
Homogentisic acid	451-13-8	C8H8O4	[M-H]-	7.38E+04
3,4-Dihydroxybenzoic acid	102-32-9	C8H8O4	[M-H]-	1.00E+05
Protocatechuic Acid Methyl Ester	2150-43-8	C8H8O4	[M-H]-	7.96E+05
Vanillic acid	121-34-6	C8H8O4	[M-H]-	3.21E+04
2',4',6'-Trihydroxyacetophenone	480-66-0	C8H8O4	[M-H]-	3.92E+05
2,3,4-Trihydroxybenzoic acid	610-02-6	C7H6O5	[M-H]-	1.57E+04
2,4,6-Trihydroxybenzoic acid	83-30-7	C7H6O5	[M+H]+	6.33E+04
Gallic acid	149-91-7	C7H6O5	[M-H]-	1.35E+06
Trans-4-Hydroxycinnamic Acid Methyl Ester	19367-38-5	C10H10O3	[M-H]-	1.65E+04
4-Methoxycinnamic acid	830-09-1	C10H10O3	[M-H]-	1.83E+04
5-Acetylsalicylic acid	13110-96-8	C9H8O4	[M+H]+	2.16E+05
Caffeic acid	331-39-5	C9H8O4	[M-H]-	1.62E+06
Propyl 4-hydroxybenzoate	94-13-3	C10H12O3	[M-H]-	2.45E+04
Methyl 2,4-dihydroxyphenylacetate	67828-42-6	C9H10O4	[M-H]-	2.36E+04
Vanillic acid methyl ester	3943-74-6	C9H10O4	[M-H]-	3.41E+03
Hydroxyphenyllactic acid	306-23-0	C9H10O4	[M-H]-	3.20E+04
3-O-Methylgallic Acid	3934-84-7	C8H8O5	[M-H]-	2.91E+04
Antiarol; 3,4,5-Trimethoxyphenol	642-71-7	C9H12O4	[M+H]+	9.48E+04
Dimethyl phthalate	131-11-3	C10H10O4	[M+H]+	1.09E+05
Methyl caffeate	3843-74-1	C10H10O4	[M-H]-	7.75E+04

Ferulic acid*	537-98-4	C10H10O4	[M-H]-	4.96E+05
Isoferulic Acid*	25522-33-2	C10H10O4	[M-H]-	7.48E+05
Dihydroferulic Acid	1135-23-5	C10H12O4	[M-H]-	1.57E+04
Syringic acid	530-57-4	C9H10O5	[M-H]-	1.01E+05
4-Hydroxy-3,5-diisopropylbenzaldehyde	10537-86-7	C13H18O2	[M+H]+	9.00E+00
2,4-Di-Tert-Butylphenol*	96-76-4	C14H22O	[M-H]-	1.49E+05
2,6-Di-tert-butylphenol*	128-39-2	C14H22O	[M-H]-	1.45E+05
Ferulic acid methyl ester	2309-07-1	C11H12O4	[M-H]-	6.93E+03
Sinapinaldehyde	4206-58-0	C11H12O4	[M-H]-	2.92E+04
Methyl Syringate	884-35-5	C10H12O5	[M-H]-	1.05E+04
Eudesmic acid (3,4,5-trimethoxybenzoic acid)	118-41-2	C10H12O5	[M+H]+	2.69E+04
Ethyl ferulate	4046-02-0	C12H14O4	[M-H]-	8.97E+03
Sinapic acid	530-59-6	C11H12O5	[M-H]-	2.65E+05
3,4,5-Trimethoxybenzoic acid methyl ester	1916-07-0	C11H14O5	[M+H]+	9.00E+00
Stilbostemin B	162411-67-8	C15H16O2	[M+H]+	9.00E+00
Mucic acid Dimethyl Ester	-	C8H14O8	[M-H]-	9.29E+05
3,4,5-Trimethoxycinnamic acid	90-50-6	C12H14O5	[M-H]-	5.95E+03
Dibutyl phthalate*	84-74-2	C16H22O4	[M+H]+	1.60E+07
Diisobutyl phthalate*	84-69-5	C16H22O4	[M+H]+	1.50E+07
Butyl isobutyl phthalate*	17851-53-5	C16H22O4	[M+H]+	1.49E+07
Orcinol glucoside	21082-33-7	C13H18O7	[M-H]-	2.80E+05
3-Hydroxy-5-Methylphenol-1-O-Glucoside	-	C13H18O7	[M-H]-	3.02E+05
4-(3,4,5-Trihydroxybenzoxy)benzoic acid	-	C14H10O7	[M-H]-	8.62E+06
4-O-Glucosyl-4-hydroxybenzoic acid	-	C13H16O8	[M-H]-	1.67E+05
Salicylic acid-2-O-glucoside	10366-91-3	C13H16O8	[M-H]-	1.60E+06
Tachioside	109194-60-7	C13H18O8	[M-H]-	1.81E+06
4-O-Glucosyl-3,4-dihydroxybenzyl alcohol	-	C13H18O8	[M-H]-	4.76E+05
1-O-Caffeoyl xylose	-	C14H16O8	[M-H]-	1.16E+05
2-Acetyl-3-hydroxyphenyl-1-O-glucoside	-	C15H20O7	[M-H]-	2.81E+06
Methyl salicylate-2-O-glucoside	10019-60-0	C14H18O8	[M-H]-	5.18E+05
1-O-Galloyl-rhamnose	-	C13H16O9	[M+H]+	9.00E+00
Protocatechuic acid-4-O-glucoside*	-	C13H16O9	[M-H]-	5.77E+06
1-O-Gentisoyl-β-D-glucoside*	23445-11-6	C13H16O9	[M-H]-	7.60E+06
Vanilloloside	74950-96-2	C14H20O8	[M-H]-	6.63E+06



5-(2-Hydroxyethyl)-2-O-glucosylphenol	-	C14H20O8	[M-H]-	3.06E+06
Cimidahurinine	142542-89-0	C14H20O8	[M-H]-	2.85E+06
3-O-p-Coumaroylshikimic acid	-	C16H16O7	[M-H]-	1.61E+05
Digallic Acid	536-08-3	C14H10O9	[M-H]-	1.66E+06
1-O-p-Coumaroyl-β-D-glucose	7139-64-2	C15H18O8	[M-H]-	5.18E+06
(2E)-3-[4-(β-D-glucopyranoside)-phenylacrylic]-acid	-	C15H18O8	[M-H]-	5.00E+05
p-Coumaric acid-4-O-glucoside	117405-48-8	C15H18O8	[M-H]-	3.15E+05
Raspberryketone glucoside	38963-94-9	C16H22O7	[M-H]-	3.84E+05
Citrusin C	18604-50-7	C16H22O7	[M-H]-	1.96E+04
isoamericanin A	-	C18H16O6	[M+H]+	3.24E+04
Demethyl coniferin	-	C15H20O8	[M-H]-	4.51E+05
Vanillic acid-4-O-glucoside	32142-31-7	C14H18O9	[M-H]-	9.64E+06
1-O-Vanilloyl-D-Glucose	-	C14H18O9	[M-H]-	2.09E+05
Gallic acid-4-O-glucoside	84274-52-2	C13H16O10	[M-H]-	4.29E+05
6-O-Galloyl-D-glucose*	13186-19-1	C13H16O10	[M-H]-	1.09E+06
2-O-Galloyl-D-glucose	-	C13H16O10	[M-H]-	8.68E+05
3-O-Galloyl-D-glucose*	-	C13H16O10	[M-H]-	1.15E+06
Koaburaside	41653-73-0	C14H20O9	[M-H]-	1.42E+06
Galloyl Methyl gallate	-	C15H12O9	[M-H]-	1.96E+05
5-O-Caffeoylshikimic acid	180981-12-8	C16H16O8	[M-H]-	2.30E+05
1-O-p-Coumaroylquinic acid	-	C16H18O8	[M-H]-	7.37E+04
3-O-p-Coumaroylquinic acid*	87099-71-6	C16H18O8	[M-H]-	7.77E+06
5-O-p-Coumaroylquinic acid*	1899-30-5	C16H18O8	[M-H]-	3.93E+06
1-O-Caffeoyl-β-D-glucose	14364-08-0	C15H18O9	[M-H]-	1.12E+06
Syringaldehyde-4-O-glucoside	-	C15H20O9	[M-H]-	4.08E+05
Dihydrocaffeoylglucose	-	C15H20O9	[M-H]-	2.69E+05
1-Caffeoylquinic acid	1241-87-8	C16H18O9	[M-H]-	2.02E+07
Cryptochlorogenic acid (4-O-Caffeoylquinic acid)	905-99-7	C16H18O9	[M-H]-	3.04E+06
Chlorogenic acid (3-O-Caffeoylquinic acid)	327-97-9	C16H18O9	[M-H]-	1.80E+06
Neochlorogenic acid (5-O-Caffeoylquinic acid)	906-33-2	C16H18O9	[M-H]-	2.47E+06
4-O-β-D-glucopyranosylferulic acid	-	C16H20O9	[M-H]-	2.39E+06
Homovanilloylquinic acid	-	C16H20O9	[M-H]-	1.04E+04
1-O-Feruloyl-β-D-glucose	7196-71-6	C16H20O9	[M-H]-	2.47E+05
Ferulic acid-4-O-glucoside	117405-51-3	C16H20O9	[M-H]-	3.09E+06

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Glucosyringic Acid	-	C15H20O10	[M-H]-	9.04E+05
Chlorogenic acid methyl ester	29708-87-0	C17H20O9	[M-H]-	6.33E+05
3-Prenyl-4-O-glucosyloxy-4-hydroxybenzoic acid	-	C18H24O8	[M-H]-	3.10E+05
Quinacyl syringic acid	-	C16H20O10	[M-H]-	2.97E+04
Trihydroxycinnamoylquinic acid	-	C16H20O10	[M-H]-	1.14E+05
Awsoniaside B	-	C17H24O9	[M-H]-	1.19E+05
4-O-Glucosyl-sinapate	-	C17H22O10	[M-H]-	1.41E+06
1-O-Sinapoyl-D-glucose	-	C17H22O10	[M-H]-	6.79E+05
Bis(2-ethylhexyl)phthalate*	117-81-7	C24H38O4	[M+H]+	5.49E+07
Diisooctyl Phthalate*	27554-26-3	C24H38O4	[M+H]+	5.49E+07
Fortuneanoside A	-	C19H22O9	[M-H]-	7.01E+04
Cimicifugic acid K	-	C20H18O9	[M-H]-	3.72E+06
Cimicifugic acid C	205114-67-6	C20H18O10	[M-H]-	2.02E+06
Benzyl- $\beta$ -gentiobioside	56775-64-5	C19H28O11	[M-H]-	3.12E+04
Dunalianoside B	-	C21H22O11	[M-H]-	2.83E+05
2-O-Salicyl-6-O-Galloyl-D-Glucose	-	C20H20O12	[M-H]-	6.96E+04
Flavogallonic Acid Dilactone	103744-88-3	C21H10O12	[M-H]-	1.58E+04
Anthranilate-1-O-Sophoroside	-	C19H27NO12	[M-H]-	2.12E+05
Trigallic acid	2131-66-0	C21H14O13	[M-H]-	7.79E+05
Monogalloyl-diglucose	-	C19H26O15	[M-H]-	1.87E+04
3,6-Di-O-caffeoyl glucose	-	C24H24O12	[M-H]-	1.56E+04
1,3-O-Dicaffeoylquinic Acid (Cynarin)	30964-13-7	C25H24O12	[M-H]-	7.78E+05
6'-O-Feruloyl-D-sucrose	118230-77-6	C22H30O14	[M-H]-	1.13E+04
Rosmarinic acid-3'-O-glucoside	910028-78-3	C24H26O13	[M-H]-	2.24E+05
3,4-Di-O-caffeoylquinic acid methyl ester	114637-83-1	C26H26O12	[M+H]+	1.98E+04
6'-O-Sinapoylsucrose	-	C23H32O15	[M-H]-	1.61E+04
Disinapoyl glucoside	-	C28H32O14	[M-H]-	9.00E+00
Tetragallic Acid(3''-O-galloyl-4''-O-galloyl-4-O-galloyl-galloyl acid)	-	C28H18O17	[M-H]-	1.58E+04
Syringoylcaffeoylquinic acid-D-glucose	-	C31H36O18	[M-H]-	2.41E+05

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Table S2 Composition of the normal diet (NFD) used in the animal experiment

Ingredients	Content (%)
Corn Flour	25
Flour	25
Cereal	25
Soybean flour	10
Fish powder	8
Bone meal	4
Yeast powder	2
Fine salt	1

Table S3 Composition of the high-fat diet (HFD) used in the animal experiment

Ingredients	Content (%)
Normal diet	70.5
Sucrose	15
Cholesterol	1.2
Lard	13
Bile salts	0.3