

Table S1. Contents of main phenolic compounds and purine alkaloids in MLGT water extract tested for hypolipidemic activity

Compounds	Contents ($\mu\text{g/g}$)
Gallic acid (GA)	9.22 ± 0.04
Epicatechin (EC)	15.14 ± 0.21
Epigallocatechin (EGC)	26.25 ± 0.75
Epicatechin gallate (ECG)	53.40 ± 2.94
Epigallocatechin gallate (EGCG)	163.48 ± 9.37
Total catechins	258.28 ± 13.26
Theobromine	4.28 ± 0.22
Caffeine	101.48 ± 5.55
Total alkaloids	105.76 ± 5.77

All data were expressed as mean \pm SD (n=2) and on a basis of dry weight of MLGT water extract. MLGT, Mingshan Laochuancha green tea.

Table S2. Volatile compounds and relative percentage contents in Mingshan Laochuancha green tea.

No.	RI	Compound	CAS number	Content (%)
1	798	4-Methyl-3-penten-2-one	141-79-7	4.31 (3.81-4.93)
2	855	(<i>Z</i>)-3-Hexenol	928-96-1	1.63 (1.25-1.85)
3	869	Hexanol	111-27-3	1.57 (1.36-1.96)
4	884	(6 <i>E</i>)-3,5-Dimethyl-1,6-octadiene	74630-87-8	0.14 (0.12-0.17)
5	902	Heptanal	111-71-7	2.88 (2.59-3.25)
6	957	Benzaldehyde	100-52-7	0.69 (0.52-0.83)
7	970	Heptanol	111-70-6	0.40 (0.23-0.63)
8	980	3-Octenol	3391-86-4	0.66 (0.42-0.97)
9	985	Sulcatone	110-93-0	2.78 (1.9-3.83)
10	999	2,6-Dimethyl-2,6-octadiene	2792-39-4	0.76 (0.49-1)
11	1014	4-Methyl-3-(1-methylethylidene)-1-cyclohexene	99805-90-0	0.41 (0.4-0.43)
12	1022	3,7,7-Trimethyl-1,3,5-cycloheptatriene	3479-89-8	0.48 (0.43-0.56)
13	1026	D-Limonene	5989-27-5	5.49 (4.94-6.39)
14	1034	Benzyl alcohol	100-51-6	1.20 (1.12-1.29)
15	1038	Benzene acetaldehyde	122-78-1	0.29 (0.25-0.36)
16	1042	1-Ethyl-2-formylpyrrole	2167-14-8	1.70 (1.4-2.1)
17	1050	3-Methyl-1,5-pentanediol	4457-71-0	0.28 (0.24-0.32)
18	1054	4-Methyldecane	2847-72-5	1.99 (1.69-2.39)
19	1066	Myrcenol	543-39-5	1.21 (1.05-1.37)
20	1068	Octanol	111-87-5	4.51 (4.27-4.78)
21	1083	(<i>Z</i>)-Linalool oxide	5989-33-3	2.16 (1.76-2.61)
22	1091	2,3-Dimethyldecane	17312-44-6	0.20 (0.16-0.27)
23	1099	Linalool	78-70-6	20.03 (19.4-20.75)
24	1102	Hotrienol	20053-88-7	5.63 (5.26-5.86)
25	1103	Nonanal	124-19-6	3.20 (2.3-3.91)
26	1107	Phenylethyl alcohol	60-12-8	0.72 (0.24-1.78)
27	1113	(<i>E</i>)-2-Nonenal	18829-56-6	0.50 (0.38-0.61)
28	1128	1-(1-Ethylvinyl)-1-(2-methylene-3-butenyl) cyclopropane	51567-07-8	0.35 (0.31-0.39)
29	1140	(<i>E</i>)- β -Terpineol	7299-40-3	0.20 (0.17-0.23)
30	1166	2-Methylundecane	7045-71-8	0.07 (0.05-0.1)
31	1168	(<i>E</i>)-Linalool oxide	34995-77-2	3.98 (3.62-4.56)
32	1191	α -Terpineol	98-55-5	0.65 (0.3-0.79)
33	1193	Safranal	116-26-7	1.10 (0.77-1.33)
34	1200	Dodecane	112-40-3	0.99 (0.82-1.25)
35	1204	Decanal	112-31-2	0.38 (0.32-0.52)
36	1214	β -Cyclocitral	432-25-7	0.76 (0.63-0.92)
37	1223	Geraniol	106-24-1	9.34 (8.4-9.86)
38	1230	(3 <i>Z</i>)-3-Hexenyl 2-methylbutanoate	53398-85-9	0.40 (0.24-0.5)
39	1263	4-Methyldodecane	6117-97-1	0.07 (0.04-0.1)

40	1276	4,6-Dimethyldodecane	61141-72-8	0.80 (0.49-1.22)
41	1299	2-Methyl-1-decanol	18675-24-6	0.34 (0.28-0.43)
42	1306	Pentyl levulinate	20279-49-6	0.30 (0.22-0.37)
43	1321	2,6,11-Trimethyldodecane	31295-56-4	0.81 (0.74-0.93)
44	1343	α -Cubebene	17699-14-8	0.94 (0.82-1.06)
45	1347	1,1-Dimethyl-3-vinyllindane	53909-98-1	0.17 (0.13-0.18)
46	1379	5-Hexenyl hexanoate	108058-81-7	0.49 (0.38-0.57)
47	1386	Patchoulane	25491-20-7	2.85 (2.56-3.2)
48	1392	α -Tetradecene	1120-36-1	0.14 (0.1-0.17)
49	1400	Tetradecane	629-59-4	0.73 (0.63-0.92)
50	1413	4,8,8-Trimethyl-2-methylene-4-vinylbicyclo[5.2.0]nonane	242794-76-9	0.42 (0.34-0.5)
51	1425	γ -Elemene	29873-99-2	0.19 (0.15-0.22)
52	1444	Geranyl acetone	3796-70-1	0.98 (0.81-1.06)
53	1447	Nonylcyclopentane	2882-98-6	0.08 (0.06-0.09)
54	1451	(<i>E</i>)- β -Famesene	18794-84-8	0.17 (0.08-0.21)
55	1461	4-Methyltetradecane	25117-24-2	0.22 (0.18-0.26)
56	1467	δ -Cadinene	483-76-1	0.66 (0.51-0.71)
57	1470	(+)-Valencene	4630-07-3	0.22 (0.21-0.23)
58	1473	β -Ionone	79-77-6	0.52 (0.45-0.62)
59	1493	α -Muurolene	31983-22-9	0.34 (0.27-0.37)
60	1507	Germacrene D	23986-74-5	2.04 (1.56-2.31)
61	1515	Calamenene	483-77-2	0.17 (0.15-0.19)
62	1527	β -Himachalene	1461-03-6	0.36 (0.24-0.43)
63	1571	3-Methylpentadecane	2882-96-4	0.28 (0.24-0.36)
64	1584	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	0.12 (0.09-0.17)
65	1600	Hexadecane	544-76-3	0.26 (0.25-0.26)
66	1625	α -Bisabolol	515-69-5	0.30 (0.22-0.39)
67	1816	Hexadecanal	629-80-1	0.06 (0.04-0.08)
68	1824	Isopropyl myristate	110-27-0	0.23 (0.18-0.29)
69	1830	Caffeine	58-08-2	0.24 (0.13-0.39)
70	1838	1-Octadecyne	629-89-0	0.30 (0.25-0.36)
71	1842	2-Heptadecanone	2922-51-2	0.07 (0.05-0.08)
72	1880	2-Hexadecyloxirane	7390-81-0	0.21 (0.17-0.26)
73	1924	Methyl isoheptadecanoate	6929-04-0	0.12 (0.1-0.13)
74	2107	Phytol	150-86-7	2.08 (1.38-2.92)

Compounds were listed in order of their retention time and results were expressed as the average relative content and corresponding content range (n=3). RI, retention indices determined on DB-5MS column using the homologous series of n-alkanes (C₇-C₂₄).

Table S3. Different taste data of Mingshan Laochuancha green tea detected by electronic tongue.

Sample	Sourness	Bitterness	Astringency	Aftertaste of B	Aftertaste of A	Umami	Richness	Saltiness
Reference solution	-13	0	0	0	0	0	0	-6
Test-1	-45.87	-2.35	-13.42	0.51	4.8	24.43	14.17	26.43
Test-2	-44.23	-1.22	-11.88	0.55	4.73	23.72	14.34	23.04
Test-3	-44.84	-1.44	-12.31	0.48	4.66	24.08	14.4	23.79

Reference solution compositions: 30 mmol/L KCl and 0.3 mmol/L tartaric acid. Test-1, test-2 and test-3 were three parallel tests of green tea water solution. Taste values greater than that of corresponding reference solution expressed the existence of this taste in green tea solution. Aftertaste of B, aftertaste of bitterness; Aftertaste of A, aftertaste of astringency.

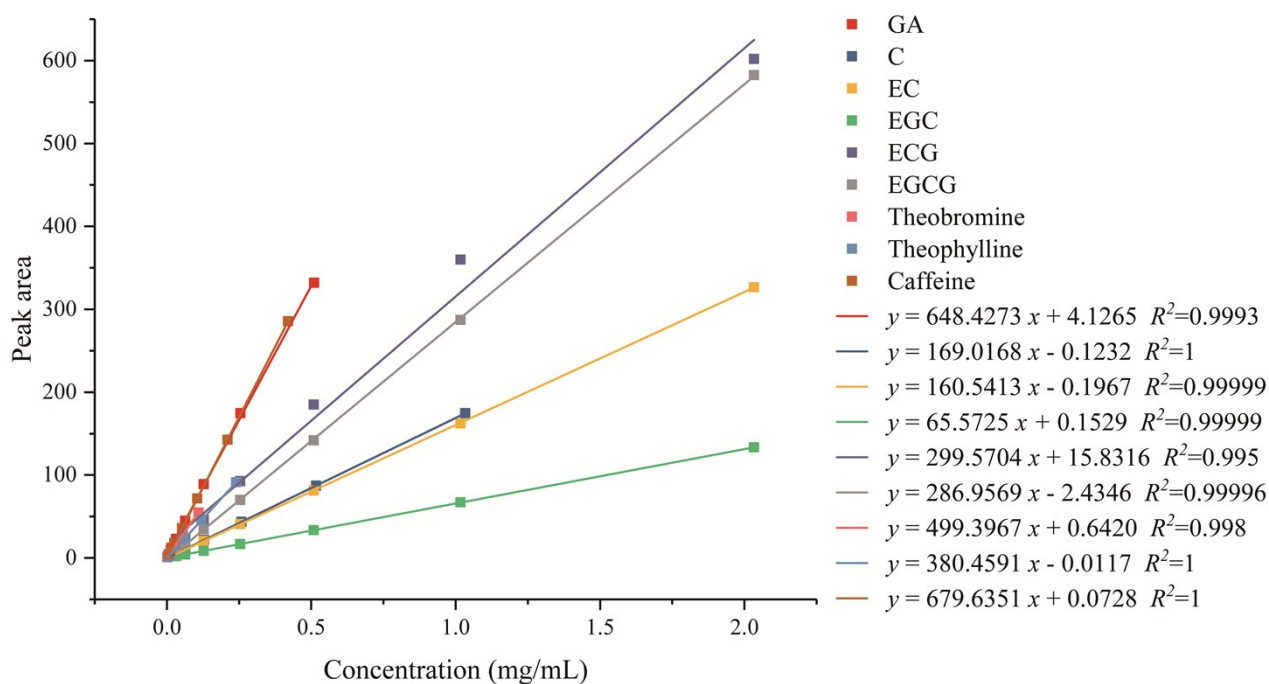


Figure S1. Calibration curves of gallic acid (GA); catechin (C); epicatechin (EC); epigallocatechin (EGC); epicatechin gallate (ECG); epigallocatechin gallate (EGCG); theobromine; theophylline; and caffeine recorded at 280 nm.

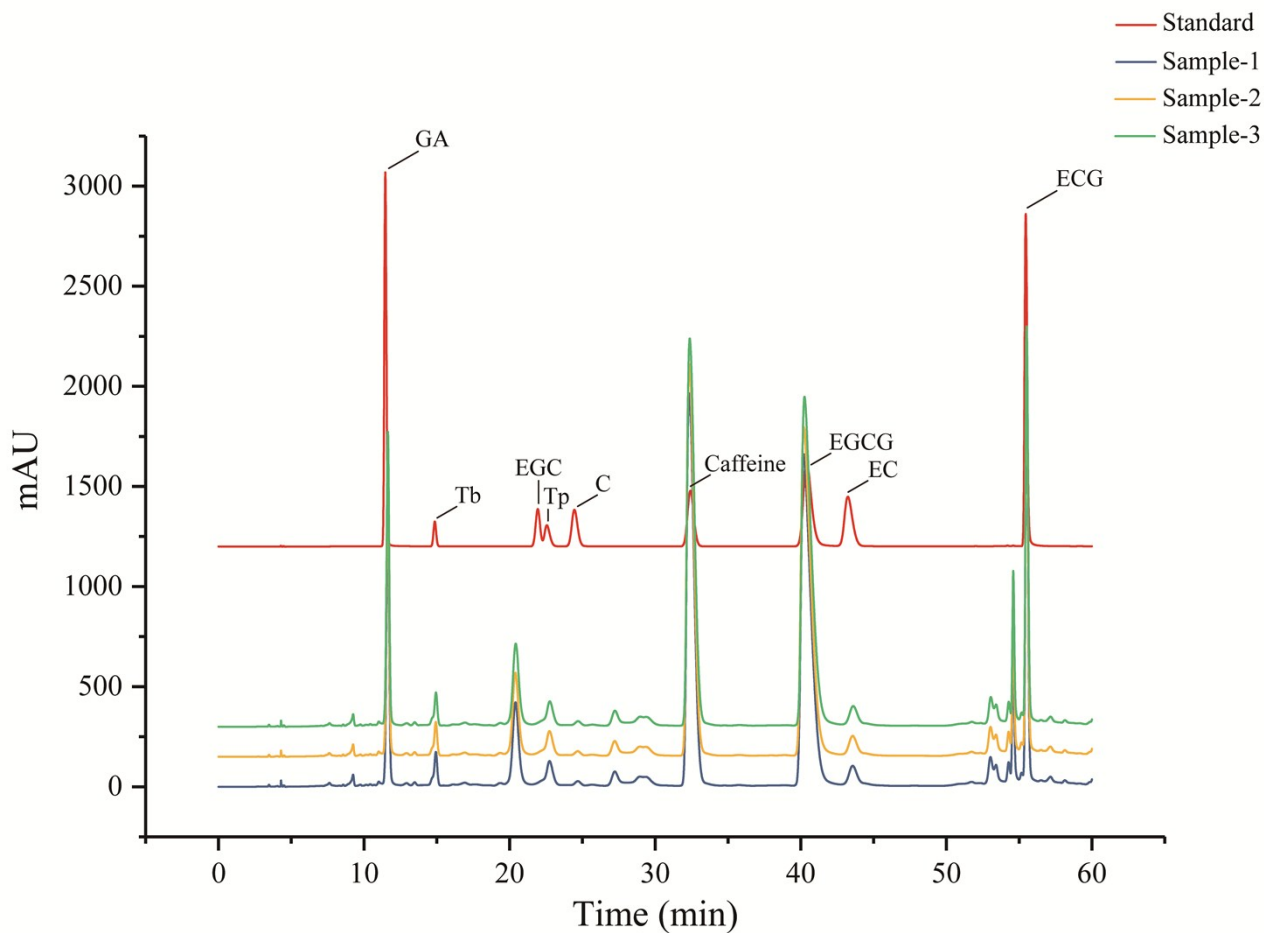


Figure S2. High-performance liquid chromatography (HPLC) chromatogram of gallic acid, catechins, and purine alkaloids at 280 nm. GA, gallic acid; Tb, theobromine; EGC, epigallocatechin; Tp, theophylline; C, catechin; EGCG, epigallocatechin gallate; EC, epicatechin; ECG, epicatechin gallate.