Supplementary S1. List of volatile compounds detected from green tea leaf samples treated with different storage temperatures (G1, G2 and G3).

Compound SL No.	Retention Time (min)	Content (%)	Match Name	Molecular Weight (amu)	CAS No
G1					
1	1.659	11.96	Dimethyl sulfide	62.019	000075-18-3
2	3.008	2.16	Ethyl fluoroformate	92.027	000461-64-3
3	3.237	2.14	Pentanal	86.073	000110-62-3
4	4.318	0.64	Pentane, 1-chloro-	106.055	000543-59-9
5	4.535	7.32	1-Pentanol	88.089	000071-41-0
6	5.273	0.39	2-Pentene, 4,4-dimethyl-	98.11	026232-98-4
7	5.362	1.04	Hexanal	100.089	000066-25-1
8	6.85	2.41	3-Hexen-1-ol	100.089	000544-12-7
9	7.226	0.93	1-Pentanol, 4-methyl-	102.104	000626-89-1
10	8.256	0.74	Heptanal	114.104	000111-71-7
11	10	0.36	(S)-(+)-5-Methyl-1-heptanol	130.136	057803-73-3
12	10.229	0.57	Benzaldehyde	106.042	000100-52-7
13	10.528	0.55	1-Butanol, 2-methyl-, propanoate	144.115	002438-20-2
14	10.712	1.27	1-Octen-3-ol	128.12	003391-86-4
15	10.865	1.42	5-Hepten-2-one, 6-methyl-	126.104	000110-93-0
16	11.107	0.86	Heptane, 2,2,4,6,6-pentamethyl-	170.203	013475-82-6
17	12.474	3.84	Benzyl Alcohol	108.058	000100-51-6
18	12.977	0.46	Benzene, ethoxy-	122.073	000103-73-1
19	13.091	0.36	3-Hexyne	82.078	000928-49-4

Compound SL No.	Retention Time (min)	Content (%)	Match Name	Molecular Weight (amu)	CAS No
20	13.486	0.42	Cyclooctyl alcohol	128.12	000696-71-9
21	13.6	0.94	1-Octanol	130.136	000111-87-5
22	13.709	0.68	2-Furanmethanol, 5-ethenyltetrahydro-.alpha.,.alpha.,5-trimethyl-, cis-	170.131	005989-33-3
23	14.218	1.18	2-Furanmethanol, 5-ethenyltetrahydro-.alpha.,.alpha.,5-trimethyl-, trans-	170.131	034995-77-2
24	14.567	4.45	1,6-Octadien-3-ol, 3,7-dimethyl-	154.136	000078-70-6
25	14.72	0.92	Cycloheptane	98.11	000291-64-5
26	14.994	5.86	Phenylethyl Alcohol	122.073	000060-12-8
27	15.522	0.48	1-Propene-1-thiol	74.019	000925-89-3
28	16.915	2.66	2H-Pyran-3-ol, 6-ethenyltetrahydro-2,2,6-trimethyl-	170.131	014049-11-7
29	17.596	1.61	Cyclohexene, 1-methyl-4-(1-methylethylidene)-	136.125	000586-62-9
30	18.181	4.49	n-Caproic acid vinyl ester	142.099	003050-69-9
31	18.353	0.41	1,6,10-Dodecatriene, 7,11-dimethyl-3-methylene-, (Z)-	204.188	028973-97-9
32	18.773	0.57	4-Methylthiazole	99.014	000693-95-8
33	19.078	7.6	2,6-Octadien-1-ol, 3,7-dimethyl-	154.136	000624-15-7
34	19.333	0.38	Octanoic Acid	144.115	000124-07-2
35	20.382	6.65	Indole	117.058	000120-72-9
36	21.674	0.42	1-Octyn-3-ol, 3-methyl-	140.12	023580-51-0

Compound SL No.	Retention Time (min)	Content (%)	Match Name	Molecular Weight (amu)	CAS No
37	23.156	4.44	2-Cyclopenten-1-one, 3-methyl-2-(2-pentenyl)-, (Z)-	164.12	000488-10-8
38	25.65	0.52	Phosphonofluoridic acid, methyl-, 3-methylcyclohexyl ester	194.087	113548-86-0
39	25.981	3.12	Phenol, 2,4-bis(1,1-dimethylethyl)-	206.167	000096-76-4
40	26.343	0.73	tert-Butyl m-Tolyl sulfide	180.097	034786-26-0
41	26.458	0.47	Naphthalene, 1,2,3,5,6,8a-hexahydro-4,7-dimethyl-1-(1-methylethyl)-, (1S-cis)-	204.188	000483-76-1
42	27.412	0.97	4-Amino-2,6-dihydroxypyrimidine	127.038	000873-83-6
43	29.467	0.7	Methyl jasmonate	224.141	001211-29-6
44	33.138	0.38	1-Decanol, 2-ethyl-	186.198	021078-65-9
45	35.689	7.65	1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl-	194.08	000058-08-2
46	37.878	1.85	n-Hexadecanoic acid	256.24	000057-10-3
G2					
1	1.659	3.13	Dimethyl sulfide	62.019	000075-18-3
2	3.008	1.55	Propane, 2-chloro-2-methyl-	92.039	000507-20-0
3	3.237	1.11	Pentanal	86.073	000110-62-3
4	4.325	1.16	Formic acid, pentyl ester	116.084	000638-49-3
5	4.541	5.46	1-Pentanol	88.089	000071-41-0
6	5.279	0.75	3-Penten-2-one, 4-methyl-	98.073	000141-79-7
7	5.667	0.72	1H-Pyrrole, 1-ethyl-	95.073	000617-92-5
8	6.85	3.45	3-Hexen-1-ol	100.089	000544-12-7
9	7.226	0.4	1-Hexanol	102.104	000111-27-3

Compound SL No.	Retention Time (min)	Content (%)	Match Name	Molecular Weight (amu)	CAS No
10	7.359	0.36	2,4-Octadiyne	106.078	002809-71-4
11	7.868	0.46	2-Heptanone	114.104	000110-43-0
12	10.235	2.27	Benzaldehyde	106.042	000100-52-7
13	10.718	1.34	1-Octen-3-ol	128.12	003391-86-4
14	10.865	1.99	5-Hepten-2-one, 6-methyl-	126.104	000110-93-0
15	11.113	0.82	Heptane, 2,2,4,6,6-pentamethyl-	170.203	013475-82-6
16	11.965	0.37	Benzene, 1,3-dichloro-	145.969	000541-73-1
17	12.474	13.69	Benzyl Alcohol	108.058	000100-51-6
18	12.971	0.77	Phenol, 4-amino-3-methyl-	123.068	002835-99-6
19	13.473	0.57	Heptanoic acid	130.099	000111-14-8
20	13.588	1.3	3,5-Octadien-2-one	124.089	038284-27-4
21	14.211	0.84	2-Furanmethanol, 5-ethenyltetrahydro-.alpha.,.alpha.,5-trimethyl-, cis-	170.131	005989-33-3
22	14.567	5	1,6-Octadien-3-ol, 3,7-dimethyl-	154.136	000078-70-6
23	14.72	0.83	Nonanal	142.136	000124-19-6
24	14.994	17.03	Phenylethyl Alcohol	122.073	000060-12-8
25	16.438	0.76	2-Nonenal, (E)-	140.12	018829-56-6
26	16.909	2.17	2H-Pyran-3-ol, 6-ethenyltetrahydro-2,2,6-trimethyl-	170.131	014049-11-7
27	18.175	4.94	n-Caproic acid vinyl ester	142.099	003050-69-9
28	18.327	0.79	1-Cyclohexene-1-carboxaldehyde, 2,6,6-trimethyl-	152.12	000432-25-7
29	18.773	0.49	4-Methylthiazole	99.014	000693-95-8

Compound SL No.	Retention Time (min)	Content (%)	Match Name	Molecular Weight (amu)	CAS No
30	19.072	6.55	4-Hexen-1-ol, 5-methyl-2-(1-methylethenyl)-, (R)-	154.136	000498-16-8
31	20.376	2.34	Indole	117.058	000120-72-9
32	21.674	0.49	1-Butene, 2,3-dimethyl-	84.094	000563-78-0
33	22.215	0.35	2(3H)-Furanone, dihydro-5-propyl-	128.084	000105-21-5
34	23.15	4.16	2-Cyclopenten-1-one, 3-methyl-2-(2-pentenyl)-, (Z)-	164.12	000488-10-8
35	25.396	0.59	3-Buten-2-one, 4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-	192.151	014901-07-6
36	25.974	2.07	Phenol, 2,4-bis(1,1-dimethylethyl)-	206.167	000096-76-4
37	26.343	0.82	5,5,8a-Trimethyl-3,5,6,7,8,8a-hexahydro-2H-chromene	180.151	054344-82-0
38	26.445	0.57	Naphthalene, 1,2,3,5,6,8a-hexahydro-4,7-dimethyl-1-(1-methylethyl)-, (1S-cis)-	204.188	000483-76-1
39	26.776	0.55	2(4H)-Benzofuranone, 5,6,7,7a-tetrahydro-4,4,7a-trimethyl-	180.115	015356-74-8
40	27.406	0.9	4,6(1H,5H)-Pyrimidinedione, dihydro-2-imino-	127.038	004425-67-6
41	29.467	0.62	Methyl jasmonate	224.141	001211-29-6
42	35.676	5.05	1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl-	194.08	000058-08-2
43	37.871	0.41	Undecane	156.188	001120-21-4
G3					
1	1.646	0.36	Dimethyl sulfide	62.019	000075-18-3

Compound SL No.	Retention Time (min)	Content (%)	Match Name	Molecular Weight (amu)	CAS No
2	2.982	0.69	1-Penten-3-ol	86.073	000616-25-1
3	3.033	0.96	Ethyl fluoroformate	92.027	000461-64-3
4	3.243	0.46	Furan, 2-ethyl-	96.058	003208-16-0
5	4.522	0.64	1-Pentanol	88.089	000071-41-0
6	5.254	0.68	3-Penten-2-one, 4-methyl-	98.073	000141-79-7
7	5.642	0.63	1H-Pyrrole, 1-ethyl-	95.073	000617-92-5
8	6.151	0.49	2-Pentenal, 2-methyl-	98.073	000623-36-9
9	6.831	1.87	3-Hexen-1-ol	100.089	000544-12-7
10	7.843	0.58	2-Heptanone	114.104	000110-43-0
11	9.993	0.35	2-Heptenal, (E)-	112.089	018829-55-5
12	10.216	6.7	Benzaldehyde	106.042	000100-52-7
13	10.509	0.85	2-Hexene, 3,5,5-trimethyl-	126.141	026456-76-8
14	10.706	1.57	1-Octen-3-ol	128.12	003391-86-4
15	10.852	2.3	5-Hepten-2-one, 6-methyl-	126.104	000110-93-0
16	11.088	0.89	2-Decen-1-ol, (E)-	156.151	018409-18-2
17	11.749	0.47	2,4-Heptadienal, (E,E)-	110.073	004313-03-5
18	12.468	15.17	Benzyl Alcohol	108.058	000100-51-6
19	12.958	1.69	2-Pyrazinamine, N,N-dimethyl-	123.08	005214-29-9
20	13.473	0.92	Heptanoic acid	130.099	000111-14-8
21	13.575	3.73	3,5-Octadien-2-one	124.089	038284-27-4
22	14.199	0.52	2-Furanmethanol, 5-ethenyltetrahydro-.alpha.,.alpha.,5-trimethyl-, cis-	170.131	005989-33-3
23	14.555	3.48	1,6-Octadien-3-ol, 3,7-dimethyl-	154.136	000078-70-6

Compound SL No.	Retention Time (min)	Content (%)	Match Name	Molecular Weight (amu)	CAS No
26	15.528	0.42	2,5-Pyrrolidinedione, 1-ethyl-	127.063	002314-78-5
27	15.834	0.38	7-Oxabicyclo[4.1.0]heptane, 1-methyl-	112.089	001713-33-3
28	16.451	0.88	Octanoic Acid	144.115	000124-07-2
29	16.902	1.33	2H-Pyran-3-ol, 6-ethenyltetrahydro-2,2,6-trimethyl-	170.131	014049-11-7
30	17.583	1.43	3-Cyclohexene-1-methanol, .alpha.,.alpha.4-trimethyl-	154.136	000098-55-5
31	18.168	3.49	n-Caproic acid vinyl ester	142.099	003050-69-9
32	18.321	0.79	1-Cyclohexene-1-carboxaldehyde, 2,6,6-trimethyl-	152.12	000432-25-7
33	18.766	0.65	4-Methylthiazole	99.014	000693-95-8
34	19.065	5.15	2,6-Octadien-1-ol, 3,7-dimethyl-, (E)-	154.136	000106-24-1
35	19.352	0.48	Nonanoic acid	158.131	000112-05-0
36	20.37	3.02	Indole	117.058	000120-72-9
37	23.143	3.75	2-Cyclopenten-1-one, 3-methyl-2-(2-pentenyl)-, (Z)-	164.12	000488-10-8
38	23.926	0.42	1,3-Cyclohexadiene, 1-methyl-4-(1-methylethyl)-	136.125	000099-86-5
39	24.499	0.49	5,9-Undecadien-2-one, 6,10-dimethyl-, (Z)-	194.167	003879-26-3
40	25.396	1.74	3-Buten-2-one, 4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-, (E)-	192.151	000079-77-6

Compound SL No.	Retention Time (min)	Content (%)	Match Name	Molecular Weight (amu)	CAS No
41	25.478	0.97	3-Buten-2-one, 4-(2,2,6-trimethyl-7-oxabicyclo[4.1.0]hept-1-yl)-	208.146	023267-57-4
42	25.968	1.72	Phenol, 2,4-bis(1,1-dimethylethyl)-	206.167	000096-76-4
43	26.184	0.35	2H-Pyran-2-carboxaldehyde, 3,4-dihydro-	112.052	000100-73-2
44	26.337	1.93	1,3-Benzenediol, 5-pentyl-	180.115	000500-66-3
45	26.77	3.23	2(4H)-Benzofuranone, 5,6,7,7a-tetrahydro-4,4,7a-trimethyl-, (R)-	180.115	017092-92-1
46	27.4	0.44	4-Amino-2,6-dihydroxypyrimidine	127.038	000873-83-6
47	29.448	0.49	Methyl jasmonate	224.141	001211-29-6
48	35.677	3.76	1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl-	194.08	000058-08-2
49	37.878	0.43	n-Hexadecanoic acid	256.24	000057-10-3

Supplementary S2. Sensory evaluation scores of green tea samples at different storage conditions (G1, G2 and G3)

Conditions	Appearance	Score	Aroma	Score	Soup color	Score	Taste	Score	Leaf bottom	Score	Overall ratings
G1	emerald green, oily	90	Tender and refreshing	92	yellow green clear	92	Fresh and mellow	92	greener and brighter	92	91.5
G2	yellow, drier	75	Alcoholic	78	light green yellow	75	Alcoholic	75	Bright yellow and green	78	76.05
G3	yellow, drier	72	smelly, stuffy	65	yellowish still bright	65	slightly bitter	60	Yellow-green to yellowish, still bright	70	65.75

*The scoring standard for sensory evaluation is: 25 points for Appearance; 10 points for soup color; 25 points for aroma; 30 points for taste; 10 points for leaf bottom, and the total score is 100 points.