

No.	Compounds	CAS number	Molecular formula	RT ^a (min)	LRI ^b	LRI ^c	Relative areas ^d										
							GCP	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
19	4-Terpineol	562-74-3	C ₁₀ H ₁₈ O	18.35	1177	1179	2.687	0.695	2.124	1.789	1.485	1.018	1.191	1.316	1.070	0.853	0.687
20	p-Cymen-8-ol	1197-01-9	C ₁₀ H ₁₄ O	18.49	1181	1181	0.894	0.115	0.357	0.353	0.319	0.114	0.201	0.268	0.336	0.090	0.239
21	Cyclohexanol, 2-methylene-5-(1-methylethenyl)-	35907-10-9	C ₁₀ H ₁₆ O	18.64	1186	1186	0.403	0.070	0.147	0.159	0.217	0.067	0.115	0.064	0.141	0.030	0.045
22	α-Terpineol	98-55-5	C ₁₀ H ₁₈ O	18.72	1189	1185	10.217	4.107	10.065	7.359	7.328	6.237	7.127	6.828	5.854	5.530	3.921
23	Decanal	112-31-2	C ₁₀ H ₂₀ O	19.02	1199	1197	1.211	0.980	1.209	1.383	1.661	1.356	1.972	3.430	1.448	2.283	0.641
24	cis-Carveol	1197-06-4	C ₁₀ H ₁₆ O	19.52	1217	1214	0.873	0.329	0.626	0.614	0.741	0.494	0.765	0.459	0.735	0.484	0.359
25	L-Carveol	99-48-9	C ₁₀ H ₁₆ O	19.6	1220	1220	0.379	0.018	0.110	0.080	0.024	nd	0.016	0.245	nd	nd	nd
26	Isogeraniol	5944-20-7	C ₁₀ H ₁₈ O	19.75	1226	1228	1.397	0.291	0.654	0.772	0.493	0.504	1.016	0.704	1.245	nd	0.426
27	β-Citronellol	106-22-9	C ₁₀ H ₂₀ O	19.85	1229	1229	0.524	0.164	0.030	1.098	0.340	0.239	0.261	0.782	0.333	nd	0.195
28	D-Carvone	2244-16-8	C ₁₀ H ₁₄ O	20.14	1240	1240	0.435	0.238	0.460	0.378	0.364	0.349	0.491	0.435	0.345	0.438	0.164
29	Piperitone	89-81-6	C ₁₀ H ₁₆ O	20.48	1252	1253	0.180	0.114	0.137	0.096	0.071	0.181	0.067	0.138	0.063	0.203	nd
30	Perilla aldehyde	2111-75-3	C ₁₀ H ₁₄ O	21.00	1271	1271	1.338	1.017	1.873	1.522	1.544	1.728	1.526	1.583	1.319	1.805	0.664
31	Thymol	89-83-8	C ₁₀ H ₁₄ O	21.40	1285	1283	0.583	0.098	0.092	0.115	0.073	0.016	0.016	0.170	0.060	nd	0.165
32	Carvacrol	499-75-2	C ₁₀ H ₁₄ O	21.57	1291	1297	3.345	0.650	3.806	1.636	0.753	0.537	0.690	9.240	0.936	0.104	1.556
33	Methyl caprate	110-42-9	C ₁₁ H ₂₂ O ₂	22.31	1319	1316	0.184	0.122	0.429	0.167	0.133	0.128	0.220	0.468	0.491	0.131	0.204
34	Methyl anthranilate	134-20-3	C ₈ H ₉ NO ₂	22.79	1338	1332	0.155	0.005	0.027	0.071	nd	0.014	nd	nd	0.075	nd	nd
35	Citronellol acetate	150-84-5	C ₁₂ H ₂₂ O ₂	23.06	1348	1348	0.233	0.275	0.294	0.334	0.243	0.693	0.525	0.494	0.359	0.591	0.197
36	α-Cubebene	17699-14-8	C ₁₅ H ₂₄	23.24	1355	1354	0.176	0.394	0.307	0.204	0.308	0.322	0.694	0.478	0.102	0.802	0.292
37	Neryl acetate	141-12-8	C ₁₂ H ₂₀ O ₂	23.33	1358	1356	0.356	0.710	0.697	0.727	0.781	1.947	2.612	1.565	0.262	2.255	0.491
38	Copaene	3856-25-5	C ₁₅ H ₂₄	23.97	1383	1378	1.016	1.600	1.511	0.904	1.272	1.532	2.623	2.387	0.459	3.797	0.977
39	β-Cubebene	13744-15-5	C ₁₅ H ₂₄	24.31	1396	1394	0.699	4.951	2.311	1.229	1.556	2.432	3.701	3.344	0.725	9.178	2.073
40	Benzoic acid, 2-(methylamino)-, methyl ester	85-91-6	C ₉ H ₁₁ NO ₂	24.55	1406	1402	40.066	5.184	28.840	19.674	17.169	11.435	12.395	9.195	27.093	6.574	7.031
41	Caryophyllene	87-44-5	C ₁₅ H ₂₄	25.11	1428	1427	3.411	1.377	3.087	1.321	0.869	1.102	1.983	2.049	0.749	2.867	0.507
42	(Z)-β-Farnesene	28973-97-9	C ₁₅ H ₂₄	25.80	1457	1458	0.095	0.216	0.823	0.425	0.144	0.316	1.051	0.677	0.268	0.696	0.173
43	Germacrene D	23986-74-5	C ₁₅ H ₂₄	26.60	1489	1488	0.505	4.142	2.308	1.410	1.165	2.200	3.425	5.788	0.772	7.269	1.736
44	(3Z,6E)-α-Farnesene	26560-14-5	C ₁₅ H ₂₄	26.76	1496	1496	0.134	0.919	0.189	0.138	0.061	0.262	0.314	0.304	nd	1.812	0.570
45	α-Farnesene	502-61-4	C ₁₅ H ₂₄	27.03	1507	1503	11.411	8.944	9.929	5.120	4.378	6.185	8.240	23.732	4.873	19.305	4.650

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							GCP	CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10
46	δ-Guaiene	3691-11-0	C ₁₅ H ₂₄	27.21	1515	1512	0.114	1.848	0.666	0.359	0.274	0.718	1.223	1.439	0.273	4.439	0.628
47	Dodecanoic acid, methyl ester	111-82-0	C ₁₃ H ₂₆ O ₂	27.34	1520	1520	0.140	0.327	0.469	0.297	0.101	0.199	0.482	0.537	0.575	0.437	0.177
48	Cadinene	523-47-7	C ₁₅ H ₂₄	27.55	1529	1529	1.713	3.368	2.718	1.515	2.099	2.564	5.401	3.734	1.032	7.382	1.634
49	Caryophyllene oxide	1139-30-6	C ₁₅ H ₂₄ O	28.99	1591	1596	0.142	0.046	0.137	0.023	0.019	0.039	0.187	0.174	0.071	0.088	0.100
50	α-Sinensal	17909-77-2	C ₁₅ H ₂₂ O	32.48	1752	1752	0.828	nd	0.160	0.072	0.028	0.053	0.209	nd	0.240	nd	nd
51	Hexadecanoic acid, methyl ester	112-39-0	C ₁₇ H ₃₄ O ₂	35.85	1924	1924	0.085	nd	0.035	0.028	0.017	nd	0.103	0.059	0.179	nd	nd

^a Retention time (min). ^b Linear retention indices of the analyte. ^c Linear retention indices reported in the database. ^d Peak area ratios relative to n-tridecan (internal standard). nd, not detected. Nd, not detected.

GCP, *Citrus reticulata* 'Chachi' (n=31). CP1, *C. reticulata* 'Unshiu' (n=3). CP2, *C. reticulata* 'Zhuhong' (n=3). CP3, *C. reticulata* 'Ponkan' (n=5). CP4, *C. reticulata* 'Suavissima' (n=3). CP5, *C. reticulata* 'Tankan' (n=2). CP6, *C. reticulata* 'Hanggan' (n=2). CP7, *C. reticulata* 'Kinokuni' (n=2). CP8, *C. reticulata* 'Shiyue Ju' (n=1). CP9, *C. reticulata* 'Subcompressa' (n=1). CP10, *C. cavaleriei* H. Léveillé ex Cavalerie (n=1).

Table S2. Details of mature tangerine fruits of different species collected in this work.

Sample No.	Scientific species name	Classification	Place of collection
S1	<i>Citrus reticulata</i> 'Unshiu'	CP	Taizhou, Fujian
S2	<i>C. reticulata</i> 'Unshiu'	CP	Taizhou, Fujian
S3	<i>C. reticulata</i> 'Unshiu'	CP	Yichang, Hubei
S4	<i>C. reticulata</i> 'Zhuhong'	CP	Ji'an, Jiangxi
S5	<i>C. reticulata</i> 'Zhuhong'	CP	Ji'an, Jiangxi
S6	<i>C. reticulata</i> 'Zhuhong'	CP	Chongqing
S7	<i>C. reticulata</i> 'Ponkan'	CP	Ji'an, Jiangxi
S8	<i>C. reticulata</i> 'Ponkan'	CP	Chongqing
S9	<i>C. reticulata</i> 'Ponkan'	CP	Chongqing
S10	<i>C. reticulata</i> 'Ponkan'	CP	Quanzhou, Fujian
S11	<i>C. reticulata</i> 'Ponkan'	CP	Quzhou, Zhejiang
S12	<i>C. reticulata</i> 'Suavissima'	CP	Wenzhou, Zhejiang
S13	<i>C. reticulata</i> 'Suavissima'	CP	Wenzhou, Zhejiang
S14	<i>C. reticulata</i> 'Suavissima'	CP	Wenzhou, Zhejiang
S15	<i>C. reticulata</i> 'Tankan'	CP	Chaozhou, Guangdong
S16	<i>C. reticulata</i> 'Tankan'	CP	Chaozhou, Guangdong
S17	<i>C. reticulata</i> 'Hanggan'	CP	Shaoguan, Guangdong
S18	<i>C. reticulata</i> 'Hanggan'	CP	Shaoguan, Guangdong
S19	<i>C. reticulata</i> 'Kinokuni'	CP	Guangxi
S20	<i>C. reticulata</i> 'Kinokuni'	CP	Fuzhou, Jiangxi
S21	<i>C. reticulata</i> 'Shiyue Ju'	CP	Sihui, Guangdong
S22	<i>C. reticulata</i> 'Subcompressa'	CP	Yongshun County, Hu'nan
S23	<i>C. cavaleriei</i> H. Léveillé ex <i>Cavalerie</i>	CP	Yichang, Hubei
G1	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G2	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G3	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G4	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G5	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G6	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G7	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G8	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G9	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G10	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G11	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G12	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong

G13	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G14	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G15	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G16	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G17	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G18	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G19	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G20	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G21	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G22	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G23	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G24	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G25	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G26	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G27	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G28	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G29	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G30	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
G31	<i>C. reticulata</i> 'Chachi'	GCP	Xinhui County, Guangdong
