

Table S1. Aroma components of the intact tea leaves treated by SBE technology.

Category	No.	Retention time	Compounds	Molecular formula	Relative mass fraction (%)	
					Control sample	Treated sample
Alcohols	1	8.512	cis-2-Pentenol	C ₅ H ₁₀ O	0.0279	0.0298
	6	12.04	Cyclohexanol	C ₆ H ₁₂ O	0.0079	0.0122
	18	18.015	cis-alpha,alpha,5-Trimethyl-5-vinyltetrahydrofuran-2-methanol	C ₁₀ H ₁₈ O ₂	0.0077	0.0066
	19	18.51	Linaloloxide	C ₁₀ H ₁₈ O ₂	0.0201	0.0183
	21	18.826	Linalool	C ₁₀ H ₁₈ O	0.0019	0.0018
	22	18.945	Hotrienol	C ₁₀ H ₁₆ O	0.0066	0.0055
	27	23.341	Nerol	C ₁₀ H ₁₈ O	0.0069	0.0063
	28	24.552	Anethole	C ₁₀ H ₁₂ O	0.0032	0.0013
	2	9.369	Hexenal	C ₆ H ₁₂ O	0.0234	0.0251
	4	10.295	Furfural	C ₅ H ₄ O ₂	0.0446	0.0436
Aldehydes	5	10.941	2-(E)-hexenal	C ₆ H ₁₀ O	0.0079	0.0078
	8	14.372	5-Methyl furfural	C ₆ H ₆ O ₂	0.0284	0.0232
	9	14.524	Benzaldehyde	C ₇ H ₆ O	0.0154	0.0137
	13	15.538	2,4-(E,E)-Heptadienal	C ₇ H ₁₀ O	0.0118	0.0064
	15	16.027	2,4-Heptadienal	C ₇ H ₁₀ O	0.0433	0.0330
	17	17.162	Benzeneacetaldehyde	C ₈ H ₈ O	0.0051	0.0038
	26	22.667	β-Cyclocitral	C ₁₀ H ₁₆ O	0.0014	0.0012
	29	25.363	E, E-2, 4-Decedienal	C ₁₀ H ₁₆ O	0.0035	0.0014
	11	15.071	Methylheptenone	C ₈ H ₁₄ O	0.0119	0.0084
	20	18.632	3,5-Octadien-2-one	C ₈ H ₁₂ O	0.0012	0.0008
Ketones	24	21.641	1-(2-methylphenyl)- Ethanone	C ₉ H ₁₀ O	0.0034	0.0025
	31	29.71	β-ionone	C ₁₃ H ₂₀ O	0.0748	0.0266
	32	29.798	4-(1,2-Oxido-2,6,6-trimethylcyclohexyl)-3-buten-2-one	C ₁₃ H ₂₀ O ₂	0.0304	0.0163
Esters	25	21.869	Methyl salicylate	C ₈ H ₈ O ₃	0.0045	0.0033
	30	29.312	γ-Decalactone	C ₁₀ H ₁₈ O ₂	0.0575	0.0324
	33	31.197	dihydroactinidiolide	C ₁₁ H ₁₆ O ₂	0.0019	0.0010
Terpenes	16	16.71	D-limonene	C ₁₀ H ₁₆	0.0012	0.0015

Alkanes	34	42.135	Heneicosane	C ₂₁ H ₄₄	0.0685	0.0668
	36	43.616	Docosane	C ₂₂ H ₄₆	0.1851	0.1576
	37	45.264	Tricosane	C ₂₃ H ₄₈	0.4716	0.4149
	38	47.189	Heptadecane	C ₂₇ H ₅₆	0.1484	0.1455
	39	49.516	Octacosane	C ₂₈ H ₅₈	0.1469	0.1618
Other compounds	40	52.403	nonacosane	C ₂₉ H ₆₀	0.6607	0.7912
	3	10.091	Methylpyrazine	C ₅ H ₆ N ₂	0.0144	0.0125
	7	12.793	2,5-Dimethylpyrazine	C ₆ H ₈ N ₂	0.0191	0.0197
	10	14.781	Hexanoic acid	C ₆ H ₁₂ O ₂	0.0352	0.0217
	12	15.317	2-Pentylfuran	C ₉ H ₁₄ O	0.0059	0.0071
	14	15.736	2-Ethyl-5- Methylpyrazine	C ₇ H ₁₀ N ₂	0.0075	0.0064
	23	20.117	Benzyl cyanide	C ₈ H ₇ N	0.0075	0.0047
	37	42.317	Phytol	C ₂₀ H ₄₀ O	0.0671	0.1183

Table S2. Aroma components of the crushed tea leaves treated by SBE technology

Category	No.	Retention time	Compounds	Molecular formula	Relative mass fraction (%)	
					Control sample	Treated sample
Alcohols	1	8.519	cis-2-Pentenol	C ₅ H ₁₀ O	0.0603	0.0569
	6	12.074	Cyclohexanol	C ₆ H ₁₂ O	0.0145	0.0056
	16	18.075	cis-alpha, alpha, 5-Trimethyl-5-vinyltetrahydrofuran-2-methanol	C ₁₀ H ₁₈ O ₂	0.0168	0.0088
	17	18.567	Linaloloxide	C ₁₀ H ₁₈ O ₂	0.0428	0.0229
	19	18.884	Linalool	C ₁₀ H ₁₈ O	0.0058	0.0027
	20	19.002	Hotrienol	C ₁₀ H ₁₆ O	0.0133	0.0091
	25	23.384	Nerol	C ₁₀ H ₁₈ O	0.021	0.0084
Aldehydes	26	24.567	Anethole	C ₁₀ H ₁₂ O	0.0096	0.006
	2	9.377	Hexenal	C ₆ H ₁₂ O	0.0624	0.0425
	4	10.318	Furfural	C ₅ H ₄ O ₂	0.1128	0.0594
	5	10.946	2-(E)-hexenal	C ₆ H ₁₀ O	0.0214	0.01
	8	14.42	5-Methyl furfural	C ₆ H ₆ O ₂	0.0789	0.0391
	9	14.564	Benzaldehyde	C ₇ H ₆ O	0.0335	0.0198
	15	17.208	Benzeneacetaldehyde	C ₈ H ₈ O	0.0149	0.0064
Ketones	24	22.698	β-Cyclocitral	C ₁₀ H ₁₆ O	0.0047	0.002
	27	25.375	E, E-2, 4-Decedienal	C ₁₀ H ₁₆ O	0.0074	0.0013
	10	15.086	Methylheptenone	C ₈ H ₁₄ O	0.0257	0.0176
	18	18.666	3,5-Octadien-2-one	C ₈ H ₁₂ O	0.0026	0.0014
	22	21.665	1-(2-methylphenyl)- Ethanone	C ₉ H ₁₀ O	0.0079	0.0042
Esters	29	29.792	β-ionone	C ₁₃ H ₂₀ O	0.185	0.0959
	13	16.562	1-Methyl-2-(1-methylethyl) benzene	C ₁₀ H ₁₄	0.0143	0.0063
	23	21.895	Methyl salicylate	C ₈ H ₈ O ₃	0.0109	0.0064
	28	29.448	γ-Decalactone	C ₁₀ H ₁₈ O ₂	0.1814	0.0467

	30	40.109	Dibutyl phthalate	C ₁₆ H ₂₂ O ₄	0.0089	0.0094
Terpenes	14	16.72	D-limonene	C ₁₀ H ₁₆	0.0082	0.0046
	31	42.153	Heneicosane	C ₂₁ H ₄₄	0.0936	0.0681
	33	43.622	Docosane	C ₂₂ H ₄₆	0.0585	0.0544
Alkanes	34	45.273	Tricosane	C ₂₃ H ₄₈	0.1881	0.1164
	35	49.538	Octacosane	C ₂₈ H ₅₈	0.0725	0.0101
	36	52.428	nonacosane	C ₂₉ H ₆₀	0.3479	0.142
	32	42.339	Phytol	C ₂₀ H ₄₀ O	0.4809	0.0776
	3	10.081	Methylpyrazine	C ₅ H ₆ N ₂	0.0402	0.0177
Other	7	12.814	2,5-Dimethylpyrazine	C ₆ H ₈ N ₂	0.0534	0.0246
compounds	11	15.328	2-Pentylfuran	C ₉ H ₁₄ O	0.0224	0.0164
	12	15.76	2,5-Dimethylpyrazine	C ₇ H ₁₀ N ₂	0.018	0.0097
	21	20.154	Benzyl cyanide	C ₈ H ₇ N	0.0241	0.0094
