

## Supplementary Materials

**Table S1**

Volatile compounds identified in RAPT samples from different storage durations

Volatile compounds	RI	Concentration (µg/100g)										
		T0	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10
Hexanal	800	—	0.45±0.06	6.04±0.80	—	—	1.38±0.22	0.41±0.02	0.52±0.06	0.53±0.01	0.64±0.12	0.65±0.05
3-methyl-Butanoic acid	811	4.44±0.50 <sup>ef</sup>	5.86±1.09 <sup>g</sup>	1.92±0.03 <sup>bc</sup>	3.04±0.48 <sup>d</sup>	5.12±0.40 <sup>f</sup>	3.75±0.37 <sup>de</sup>	0.66±0.06 <sup>a</sup>	1.81±0.28 <sup>bc</sup>	1.22±0.06 <sup>ab</sup>	1.27±0.10 <sup>ab</sup>	2.08±0.03 <sup>c</sup>
2-methyl-Butanoic acid	811	5.03±0.82 <sup>f</sup>	4.55±0.76 <sup>f</sup>	2.37±0.03 <sup>c</sup>	3.26±0.32 <sup>e</sup>	3.13±0.05 <sup>de</sup>	2.52±0.31 <sup>cd</sup>	0.61±0.10 <sup>a</sup>	1.09±0.19 <sup>ab</sup>	0.64±0.13 <sup>a</sup>	1.35±0.23 <sup>b</sup>	1.43±0.08 <sup>b</sup>
1-ethyl-1H-Pyrrole	829	1.37±0.02	0.95±0.03	—	—	—	—	—	—	—	—	—
1,2,5,5-tetra-methyl-1,3-Cyclopentadiene	840	2.78±0.36 <sup>bc</sup>	2.32±0.07 <sup>bc</sup>	1.44±0.26 <sup>a</sup>	5.37±0.76 <sup>e</sup>	3.68±0.63 <sup>d</sup>	2.02±0.25 <sup>ab</sup>	2.26±0.11 <sup>bc</sup>	1.52±0.23 <sup>a</sup>	2.38±0.26 <sup>bc</sup>	2.2±0.40 <sup>bc</sup>	4.30±0.33 <sup>d</sup>
(Z)-3-Hexen-1-ol	851	3.02±0.21	2.92±0.28	—	—	—	—	—	—	—	—	—
2-Hexenal	853	—	—	3.34±0.56	6.65±0.39	11.02±0.49	3.75±0.44	5.88±1.00	3.16±0.53	7.68±1.61	6.13±0.51	6.79±0.82
1-Hexanol	867	5.58±0.07 <sup>f</sup>	5.80±0.79 <sup>f</sup>	3.05±0.03 <sup>cd</sup>	4.06±0.30 <sup>e</sup>	4.62±0.73 <sup>e</sup>	3.20±0.39 <sup>d</sup>	2.29±0.10 <sup>b</sup>	2.14±0.36 <sup>ab</sup>	3.01±0.16 <sup>cd</sup>	1.53±0.31 <sup>a</sup>	2.36±0.35 <sup>bc</sup>
p-Xylene	870	1.79±0.28 <sup>ab</sup>	1.92±0.21 <sup>abc</sup>	1.72±0.29 <sup>ab</sup>	5.71±0.40 <sup>f</sup>	4.22±0.61 <sup>e</sup>	1.67±0.32 <sup>a</sup>	2.62±0.07 <sup>d</sup>	2.54±0.26 <sup>d</sup>	2.88±0.03 <sup>d</sup>	2.46±0.18 <sup>cd</sup>	2.28±0.46 <sup>bcd</sup>

2-Heptanone	889	4.15±0. 54 <sup>de</sup>	3.94±0. 20 <sup>de</sup>	2.78±0. .01 <sup>ab</sup>	3.81±0. 57 <sup>c</sup>	5.83±0. 77 <sup>f</sup>	4.58±0. 08 <sup>c</sup>	2.99±0. 29 <sup>ab</sup>	2.36±0. 30 <sup>a</sup>	3.06±0. 11 <sup>b</sup>	3.98±0. 12 <sup>de</sup>	2.34±0. 17 <sup>a</sup>
Heptanal	901	4.58±0. 76 <sup>ab</sup>	4.51±0. 48 <sup>ab</sup>	7.8±0. 18 <sup>de</sup>	6.68±0. 53 <sup>cd</sup>	8.71±1. 07 <sup>e</sup>	7.09±0. 42 <sup>d</sup>	7.03±1. 17 <sup>d</sup>	3.42±0. 45 <sup>a</sup>	7.60±0. 13 <sup>de</sup>	5.69±0. 35 <sup>bc</sup>	5.16±1. 03 <sup>b</sup>
2-Propenoic acid, butyl ester	902	1.23±0. 13	—	—	—	—	—	—	—	—	—	—
2-butoxy-Etha nol	907	—	0.46±0. 05	—	—	1.59±0. 02	—	0.94±0. 18	0.50±0. 06	0.38±0. 07	0.64±0. 07	0.66±0. 09
Hexanoic acid, methyl ester	924	—	—	—	—	0.99±0. 06	—	0.39±0. 04	2.36±0. 30	0.50±0. 03	—	—
Camphene	933	—	—	—	—	—	—	1.20±0. 10	1.32±0. 23	—	—	—
α-Pinene	939	0.58±0. 09 <sup>ab</sup>	0.64±0. 07 <sup>bc</sup>	0.45±0. .07 <sup>a</sup>	0.50±0. 01 <sup>a</sup>	0.78±0. 03 <sup>cd</sup>	0.77±0. 11 <sup>cd</sup>	0.82±0. 12 <sup>d</sup>	1.05±0. 09 <sup>e</sup>	1.04±0. 07 <sup>e</sup>	1.04±0. 08 <sup>e</sup>	0.75±0. 04 <sup>cd</sup>
2-Octanone	952	0.53±0. 04	—	—	—	—	1.36±0. 24	—	—	—	—	—
Hexanoic acid	961	26.59± 3.60	25.95± 2.40	9.51±1 .53	—	27.39± 0.27	26.98± 5.34	—	—	—	—	—
1-(3-methylen ecyclopentyl)- Ethanone	963	—	—	—	—	—	—	0.73±0. 03	0.59±0. 09	—	—	—
Benzaldehyde	966	14.77± 0.67 <sup>a</sup>	18.15± 0.58 <sup>ab</sup>	35.90± 4.64 <sup>d</sup>	26.23± 1.89 <sup>c</sup>	46.78± 4.13 <sup>e</sup>	24.25± 4.58 <sup>bc</sup>	18.65± 1.86 <sup>ab</sup>	20.73± 1.42 <sup>abc</sup>	23.83± 4.25 <sup>bc</sup>	21.93± 4.13 <sup>bc</sup>	24.15± 4.26 <sup>bc</sup>
3,5,5-trimethyl -2-Hexene	968	37.93± 1.16 <sup>g</sup>	19.55± 2.69 <sup>f</sup>	7.66±1 .02 <sup>d</sup>	7.12±0. 70 <sup>cd</sup>	10.46± 1.57 <sup>e</sup>	8.69±1. 55 <sup>de</sup>	3.33±0. 50 <sup>ab</sup>	3.30±0. 58 <sup>ab</sup>	2.89±0. 56 <sup>a</sup>	4.41±0. 10 <sup>ab</sup>	5.28±0. 87 <sup>bc</sup>

2-Methylenecyclohexanol	974	—	—	—	—	—	—	2.71±0.49	3.34±0.68	3.81±0.08	4.78±0.69	—
1-Octen-3-ol	976	95.72±2.24 <sup>g</sup>	51.67±5.98 <sup>f</sup>	26.59±2.40 <sup>d</sup>	23.11±2.95 <sup>cd</sup>	36.69±1.59 <sup>e</sup>	21.79±1.34 <sup>c</sup>	11.90±0.74 <sup>a</sup>	12.06±2.07 <sup>a</sup>	12.57±1.39 <sup>ab</sup>	17.11±0.51 <sup>b</sup>	15.51±2.53 <sup>ab</sup>
2,3-Octanedione	986	7.45±0.87 <sup>c</sup>	4.24±0.16 <sup>ab</sup>	5.39±0.86 <sup>b</sup>	9.51±1.89 <sup>d</sup>	7.45±1.40 <sup>c</sup>	4.07±0.83 <sup>ab</sup>	3.12±0.16 <sup>a</sup>	2.74±0.52 <sup>a</sup>	3.71±0.43 <sup>a</sup>	2.65±0.02 <sup>a</sup>	3.08±0.32 <sup>a</sup>
6-methyl-5-Hepten-2-one	987	19.46±1.55 <sup>ef</sup>	14.85±0.99 <sup>cd</sup>	12.83±1.47 <sup>abc</sup>	16.39±3.17 <sup>cde</sup>	21.93±3.56 <sup>f</sup>	17.33±3.32 <sup>de</sup>	10.80±1.05 <sup>ab</sup>	9.99±1.93 <sup>ab</sup>	9.30±1.33 <sup>a</sup>	13.45±0.59 <sup>bc</sup>	12.93±0.69 <sup>abc</sup>
β-Myrcene	992	—	17.95±0.84	—	—	—	21.02±3.18	—	—	—	16.13±0.84	12.85±1.02
(2R,5R)-2-Methyl-5-(prop-1-en-2-yl)-2-vinyltetrahydrofuran	993.8	4.74±0.32 <sup>a</sup>	5.62±0.07 <sup>ab</sup>	4.89±0.76 <sup>ab</sup>	7.50±1.42 <sup>cd</sup>	11.66±1.55 <sup>e</sup>	6.53±1.16 <sup>abc</sup>	5.03±0.01 <sup>ab</sup>	5.78±1.14 <sup>abc</sup>	6.62±0.14 <sup>bc</sup>	8.92±1.46 <sup>d</sup>	6.30±0.58 <sup>abc</sup>
Octanal	1001	7.28±0.09 <sup>ab</sup>	6.62±0.67 <sup>ab</sup>	6.01±0.27 <sup>a</sup>	6.26±1.19 <sup>a</sup>	18.80±0.89 <sup>d</sup>	11.07±1.91 <sup>c</sup>	6.98±0.59 <sup>ab</sup>	6.21±0.97 <sup>a</sup>	8.56±1.28 <sup>b</sup>	8.36±1.42 <sup>b</sup>	7.43±1.07 <sup>ab</sup>
(E,E)-2,4-Heptadienal	1011	11.52±0.35 <sup>abc</sup>	10.40±0.30 <sup>a</sup>	10.68±2.06 <sup>ab</sup>	15.28±0.40 <sup>c</sup>	18.85±1.86 <sup>f</sup>	11.11±1.87 <sup>ab</sup>	13.18±1.21 <sup>bcde</sup>	12.34±2.32 <sup>abcd</sup>	14.41±0.18 <sup>de</sup>	14.13±0.28 <sup>de</sup>	13.92±1.45 <sup>cde</sup>
α-Terpinene	1018	4.93±0.23 <sup>ab</sup>	5.96±0.12 <sup>cd</sup>	4.64±0.50 <sup>ab</sup>	6.40±0.19 <sup>d</sup>	8.56±0.11 <sup>c</sup>	5.97±0.39 <sup>cd</sup>	4.82±0.46 <sup>ab</sup>	5.12±0.45 <sup>bc</sup>	5.40±0.35 <sup>bc</sup>	6.67±1.18 <sup>d</sup>	4.03±0.64 <sup>a</sup>
Benzyl chloride	1019	1.50±0.05 <sup>d</sup>	1.01±0.13 <sup>abc</sup>	1.06±0.18 <sup>bc</sup>	1.62±0.08 <sup>de</sup>	1.72±0.07 <sup>e</sup>	1.05±0.18 <sup>abc</sup>	1.15±0.15 <sup>bc</sup>	0.97±0.16 <sup>ab</sup>	1.22±0.09 <sup>c</sup>	0.82±0.09 <sup>a</sup>	0.94±0.01 <sup>ab</sup>
o-Cymene	1026	4.22±0.16	—	—	15.27±2.08	—	19.3±3.55	—	—	—	—	—

2-ethyl-1-Hexanol	1026.3	3.74±0.64 <sup>a</sup>	56.79±4.80 <sup>f</sup>	33.71±6.19 <sup>c</sup>	32.19±3.17 <sup>c</sup>	60.63±5.05 <sup>f</sup>	19.3±3.55 <sup>b</sup>	28.46±0.87 <sup>c</sup>	49.97±1.65 <sup>e</sup>	42.02±0.52 <sup>d</sup>	56.39±0.84 <sup>f</sup>	49.57±3.43 <sup>e</sup>
D-Limonene	1030	44.37±7.79 <sup>b</sup>	68.31±1.50 <sup>d</sup>	74.91±12.27 <sup>cd</sup>	27.88±3.64 <sup>d</sup>	74.48±4.30 <sup>a</sup>	57.35±11.33 <sup>bc</sup>	45.45±3.18 <sup>b</sup>	55.43±8.92 <sup>b</sup>	53.03±4.01 <sup>b</sup>	69.44±5.84 <sup>cd</sup>	43.89±7.40 <sup>b</sup>
Benzyl alcohol	1034.4	14.21±0.19	—	—	12.43±0.26	—	—	—	—	—	—	—
2,6-dimethyl-5-Heptenal	1044	25.51±0.37 <sup>e</sup>	21.35±1.30 <sup>cd</sup>	18.09±3.51 <sup>bc</sup>	25.65±2.28 <sup>e</sup>	24.54±3.10 <sup>de</sup>	20.66±2.77 <sup>c</sup>	13.24±0.91 <sup>a</sup>	14.65±2.43 <sup>ab</sup>	15.89±0.06 <sup>ab</sup>	13.44±1.49 <sup>a</sup>	12.94±0.81 <sup>a</sup>
Benzeneacetaldehyde	1049	11.93±0.26 <sup>ab</sup>	9.98±0.62 <sup>a</sup>	11.99±1.36 <sup>ab</sup>	22.67±0.96 <sup>d</sup>	22.44±3.00 <sup>d</sup>	11.63±1.93 <sup>ab</sup>	12.24±1.19 <sup>ab</sup>	12.24±2.10 <sup>ab</sup>	19.25±0.65 <sup>c</sup>	14.11±0.30 <sup>b</sup>	17.16±0.73 <sup>c</sup>
(Z)-3,7-dimethyl-1,3,6-Octatriene	1051	6.53±0.26 <sup>ab</sup>	8.29±0.68 <sup>cde</sup>	7.43±0.68 <sup>abcd</sup>	9.44±0.35 <sup>e</sup>	10.86±0.37 <sup>f</sup>	7.81±0.93 <sup>bcd</sup>	6.94±0.38 <sup>ab</sup>	6.44±0.86 <sup>a</sup>	7.14±0.44 <sup>abc</sup>	8.52±0.54 <sup>de</sup>	7.54±1.29 <sup>abcd</sup>
1H-Pyrrole-2-carboxaldehyde, 1-ethyl-	1054	25.94±0.51 <sup>e</sup>	23.39±2.05 <sup>de</sup>	23.00±4.15 <sup>de</sup>	24.66±3.13 <sup>de</sup>	32.01±2.66 <sup>f</sup>	20.12±3.50 <sup>cd</sup>	10.05±0.31 <sup>a</sup>	12.15±2.43 <sup>a</sup>	9.05±1.36 <sup>a</sup>	13.20±0.29 <sup>ab</sup>	17.39±3.04 <sup>bc</sup>
2-Octenal, (E)-	1056.7	—	—	—	—	—	—	—	2.11±0.31	—	2.87±0.05	—
Ethanone, 1-(1H-pyrrol-2-yl)-	1063.2	13.99±1.34 <sup>bc</sup>	13.35±0.74 <sup>b</sup>	13.25±0.65 <sup>b</sup>	25.82±0.14 <sup>d</sup>	23.12±2.73 <sup>d</sup>	16.67±2.63 <sup>c</sup>	11.84±0.82 <sup>ab</sup>	12.01±1.22 <sup>ab</sup>	12.96±2.29 <sup>ab</sup>	12.39±2.09 <sup>ab</sup>	9.93±1.76 <sup>a</sup>
γ-Terpinene	1064	12.38±2.06 <sup>bc</sup>	13.80±1.93 <sup>cd</sup>	15.40±2.70 <sup>d</sup>	12.75±0.50 <sup>bcd</sup>	10.23±0.88 <sup>b</sup>	6.90±0.21 <sup>a</sup>	6.32±0.08 <sup>a</sup>	10.18±1.49 <sup>b</sup>	7.18±0.67 <sup>a</sup>	13.09±0.20 <sup>cd</sup>	12.61±2.44 <sup>bcd</sup>
(E)-2-Octen-1-ol	1067	59.44±2.59 <sup>g</sup>	34.28±3.24 <sup>f</sup>	28.8±0.29 <sup>e</sup>	27.26±0.19 <sup>e</sup>	27.93±0.66 <sup>e</sup>	18.67±1.05 <sup>d</sup>	13.39±0.38 <sup>c</sup>	9.72±1.11 <sup>b</sup>	6.22±0.82 <sup>a</sup>	9.99±0.55 <sup>b</sup>	9.81±0.55 <sup>b</sup>

1-Octanol	1068	20.41± 0.43 <sup>c</sup>	25.39± 1.53 <sup>d</sup>	27.68± 5.06 <sup>d</sup>	49.66± 0.06 <sup>f</sup>	39.84± 2.93 <sup>e</sup>	26.91± 4.28 <sup>d</sup>	8.53±1. 21 <sup>ab</sup>	7.62±0. 37 <sup>a</sup>	12.67± 0.51 <sup>b</sup>	10.15± 0.95 <sup>ab</sup>	10.55± 1.29 <sup>ab</sup>
trans-Linalool oxide (furanoid)	1076	46.04± 4.44 <sup>ab</sup>	44.25± 4.77 <sup>ab</sup>	61.16± 6.85 <sup>cd</sup>	76.5±1 4.48 <sup>e</sup>	67.97± 2.44 <sup>de</sup>	52.65± 7.51 <sup>bc</sup>	41.15± 3.95 <sup>ab</sup>	38.55± 5.53 <sup>a</sup>	43.51± 7.40 <sup>ab</sup>	43.03± 2.98 <sup>ab</sup>	49.44± 1.17 <sup>ab</sup>
endo-2-Methyl bicyclo[3.3.1]n onane	1083 .343 72	0.85±0. 12	—	—	—	—	—	—	1.53±0. 16	—	—	—
cis-5-ethenylte t												
rahydro-α, α, 5-trimethyl-2- Fu	1088	90.90± 3.28 <sup>cd</sup>	88.30± 8.28 <sup>cd</sup>	103.91 ±8.67 <sup>d</sup> <sub>e</sub>	93.83± 18.50 <sup>cde</sup>	108.56 ±3.73 <sup>e</sup>	79.86± 12.01 <sup>bc</sup>	65.34± 8.57 <sup>ab</sup>	52.30± 9.05 <sup>a</sup>	61.88± 6.83 <sup>a</sup>	66.3±3. 94 <sup>ab</sup>	66.69± 8.19 <sup>ab</sup>
ranmethanol												
3,5-Octadien-2 -one	1093	—	—	—	—	19.47± 0.73	—	9.12±0. 41	—	—	—	—
3-Cyclohexen- 1-one, 3,5,5-trimethyl —	1097	1.56±0. 25	—	—	—	—	—	—	—	—	—	—
2-Cyclohexen- 1-one, 3,4,4-trimethyl —	1097	—	—	0.63±0 .05	—	0.94±0. 10	0.73±0. 14	—	—	0.67±0. 11	—	—
Linalool	1106	271.51 ±2.55 <sup>de</sup>	253.54 ±15.61 <sup>d</sup> <sub>e</sub>	275.46 ±46.89 <sub>e</sub>	482.41 ±5.36 <sup>g</sup>	332.09 ±29.48 <sup>f</sup>	231.47 ±27.77 <sup>c</sup> <sub>d</sub>	182.61 ±19.81 <sup>a</sup> <sub>b</sub>	161.46 ±29.32 <sup>a</sup>	209.00 ±6.52 <sup>bc</sup>	201.65 ±8.40 <sup>abc</sup>	184.53 ±20.76 <sup>a</sup> <sub>b</sub>

3,7-dimethyl-1,5,7-Octatrien-3-ol	1106	70.30±1.19 <sup>def</sup>	63.29±5.05 <sup>cd</sup>	82.77±13.45 <sup>f</sup>	78.88±14.00 <sup>ef</sup>	112.34±3.17 <sup>g</sup>	67.20±11.20 <sup>de</sup>	51.62±2.36 <sup>bc</sup>	43.34±8.27 <sup>ab</sup>	29.66±4.87 <sup>a</sup>	41.49±1.24 <sup>ab</sup>	37.53±1.89 <sup>a</sup>
(E,E)-2,4-Octadienal	1113	—	—	—	—	—	—	—	3.16±0.45	—	3.53±0.07	—
2,6-dimethyl-Cyclohexanol	1114	28.45±0.56 <sup>bc</sup>	27.36±3.32 <sup>bc</sup>	43.77±7.89 <sup>d</sup>	31.94±3.72 <sup>c</sup>	32.85±5.38 <sup>c</sup>	23.78±4.75 <sup>b</sup>	13.27±2.32 <sup>a</sup>	11.37±1.90 <sup>a</sup>	13.43±1.89 <sup>a</sup>	11.54±0.61 <sup>a</sup>	16.37±0.01 <sup>a</sup>
Phenylethyl Alcohol	1116	22.40±0.32	19.74±1.41	—	34.19±5.41	32.15±0.47	—	—	12.63±2.50	—	13.73±1.58	—
2-ethyl-Hexanoic acid	1116.7	—	4.03±0.50	—	6.62±1.15	—	—	—	—	4.68±0.53	—	—
2,6,6-trimethyl-2-Cyclohexene-1-carboxaldehyde	1122.9	—	—	—	—	4.65±0.74	—	6.71±0.41	8.39±0.84	5.51±0.94	8.16±0.76	9.35±1.53
Isophorone	1124	2.69±0.28 <sup>a</sup>	2.79±0.48 <sup>a</sup>	4.72±0.86 <sup>cd</sup>	5.18±0.67 <sup>d</sup>	5.61±0.60 <sup>d</sup>	3.94±0.47 <sup>bc</sup>	2.52±0.09 <sup>a</sup>	2.67±0.45 <sup>a</sup>	2.84±0.52 <sup>a</sup>	2.67±0.21 <sup>a</sup>	3.72±0.45 <sup>b</sup>
(E,Z)-2,6-dimethyl-2,4,6-Octatriene	1131	—	—	1.99±0.22	—	—	—	—	—	—	—	1.59±0.12
E,E-2,6-Dimethyl-1,3,5,7-octatetraene	1132	2.73±0.18	1.91±0.15	2.7±0.07	—	2.64±0.37	1.17±0.18	—	—	—	0.92±0.06	—
3-Nonen-2-one	1136	1.37±0.22 <sup>ab</sup>	1.49±0.14 <sup>abc</sup>	1.73±0.23 <sup>abc</sup>	2.79±0.34 <sup>d</sup>	3.50±0.62 <sup>e</sup>	2.51±0.27 <sup>d</sup>	1.24±0.17 <sup>a</sup>	1.32±0.16 <sup>a</sup>	1.48±0.24 <sup>abc</sup>	1.96±0.18 <sup>c</sup>	1.89±0.14 <sup>bc</sup>

Benzyl nitrile	1143	—	—	—	—	3.57±0.37	2.35±0.31	2.43±0.36	2.60±0.09	1.22±0.04	—	1.67±0.28
(R,S)-5-Ethyl-6-methyl-3E-hepten-2-one	1143.9	6.47±1.25	—	—	—	—	—	—	—	—	—	—
1,2-dimethoxy-Benzene	1146	6.51±1.21 <sup>a</sup>	11.85±1.11 <sup>de</sup>	16.85±0.59 <sup>f</sup>	17.19±1.41 <sup>f</sup>	17.24±0.52 <sup>f</sup>	16.19±0.95 <sup>f</sup>	9.68±1.61 <sup>bc</sup>	8.28±1.34 <sup>ab</sup>	7.99±0.63 <sup>ab</sup>	10.65±0.19 <sup>cd</sup>	13.52±0.09 <sup>e</sup>
(E,E)-2,6-Nonadienal	1146	—	—	—	—	—	1.89±0.26	—	1.38±0.11	—	—	1.49±0.27
2,3,3-trimethyl-Bicyclo[2.2.1]heptan-2-ol	1148	5.41±0.61 <sup>ef</sup>	4.97±0.92 <sup>cde</sup>	5.39±0.21 <sup>ef</sup>	7.85±0.97 <sup>g</sup>	6.21±0.16 <sup>f</sup>	5.14±0.52 <sup>de</sup>	4.32±0.49 <sup>bcd</sup>	3.15±0.04 <sup>a</sup>	4.01±0.83 <sup>abc</sup>	5.94±0.12 <sup>ef</sup>	3.78±0.01 <sup>ab</sup>
1-Nonanol	1169.2	10.81±0.17 <sup>cd</sup>	8.38±0.42 <sup>ab</sup>	11.53±1.74 <sup>d</sup>	17.39±1.81 <sup>c</sup>	19.69±2.21 <sup>f</sup>	10.48±0.52 <sup>cd</sup>	8.98±0.36 <sup>bc</sup>	8.03±1.46 <sup>ab</sup>	6.94±0.48 <sup>ab</sup>	7.74±0.07 <sup>ab</sup>	6.53±0.09 <sup>a</sup>
3,4-Dimethoxytoluene	1172	—	—	—	—	—	—	2.03±0.29	—	—	3.09±0.13	4.14±0.84
DL-Menthol	1173	48.93±0.51 <sup>ab</sup>	58.07±1.32 <sup>bc</sup>	74.09±10.77 <sup>d</sup>	77.28±11.84 <sup>d</sup>	67.90±7.93 <sup>cd</sup>	45.88±9.17 <sup>ab</sup>	48.32±2.93 <sup>ab</sup>	46.46±5.97 <sup>ab</sup>	45.21±0.99 <sup>ab</sup>	39.29±2.84 <sup>a</sup>	176.36±15.6 <sup>c</sup>
Octanoic acid	1173	14.04±0.41 <sup>c</sup>	15.77±0.98 <sup>c</sup>	26.17±4.85 <sup>de</sup>	29.59±4.36 <sup>ef</sup>	32.27±2.50 <sup>f</sup>	23.99±1.71 <sup>d</sup>	4.60±0.34 <sup>a</sup>	7.59±1.22 <sup>ab</sup>	7.69±1.30 <sup>ab</sup>	9.55±1.81 <sup>b</sup>	15.06±2.67 <sup>c</sup>
(R)-4-methyl-1-(1-methyl-3-cyclohexen-1-yl)-3-cyclohexen-1-ol	1175	13.83±0.27 <sup>a</sup>	19.14±1.47 <sup>b</sup>	22.41±3.93 <sup>bc</sup>	32.01±5.03 <sup>d</sup>	31.49±3.08 <sup>d</sup>	25.00±2.56 <sup>c</sup>	19.52±1.30 <sup>b</sup>	18.24±3.07 <sup>ab</sup>	21.57±1.50 <sup>bc</sup>	22.86±0.80 <sup>bc</sup>	21.79±1.69 <sup>bc</sup>

(3R,6S)-2,2,6-Trimethyl-6-vinyltetrahydro-2H-pyran-3-ol	1183	8.88±0.55 <sup>c</sup>	8.23±1.24 <sup>abc</sup>	12.01±2.03 <sup>d</sup>	14.64±2.63 <sup>e</sup>	11.63±1.26 <sup>d</sup>	8.25±0.38 <sup>abc</sup>	7.13±1.16 <sup>abc</sup>	6.01±0.71 <sup>a</sup>	8.44±0.70 <sup>bc</sup>	6.29±0.56 <sup>ab</sup>	7.52±0.01 <sup>abc</sup>
Methyl salicylate	1187	39.34±0.18	29.65±2.16	35.28±4.83	37.53±3.98	—	—	—	—	—	—	—
4-trimethyl- $\alpha$ , $\alpha$ -Benzenemethanol	1188	—	—	—	—	—	—	—	—	—	—	7.23±0.58
$\alpha$ -Terpineol	1190	102.34±0.95 <sup>a</sup>	136.06±8.53 <sup>bc</sup>	165.38±28.08 <sup>d</sup>	193.80±8.27 <sup>e</sup>	200.51±12.53 <sup>e</sup>	152.52±11.32 <sup>bcd</sup>	125.56±20.12 <sup>ab</sup>	103.74±18.79 <sup>a</sup>	152.97±13.65 <sup>bcd</sup>	133.27±8.64 <sup>bc</sup>	159.20±20.92 <sup>cd</sup>
Naphthalene	1190	2.48±0.16	3.40±0.20	4.29±0.63	—	7.94±0.61	—	—	—	4.14±0.18	—	—
1-ethyl-2,5-Pyrrolidinedione	1191	2.90±0.36	—	—	14.26±2.61	—	—	6.88±1.17	4.39±0.86	6.94±1.22	6.30±0.38	5.52±0.25
2,6,6-trimethyl-1,3-Cyclohexadiene-1-carboxaldehyde	1205	24.66±0.15 <sup>d</sup>	22.10±1.60 <sup>c</sup>	26.42±0.11 <sup>de</sup>	32.52±3.37 <sup>f</sup>	35.64±0.08 <sup>g</sup>	27.49±2.06 <sup>e</sup>	20.81±0.18 <sup>c</sup>	14.67±0.09 <sup>a</sup>	17.96±0.67 <sup>b</sup>	16.29±1.32 <sup>ab</sup>	16.06±0.77 <sup>ab</sup>
2,3-dihydro-Benzofuran	1219	6.05±0.18	5.11±0.56	5.99±0.93	7.64±1.31	8.01±1.3	4.69±0.09	3.74±0.58	2.98±0.37	4.18±0.48	—	—
2,6,6-trimethyl-1-Cyclohexene-1-carboxaldehyde	1220	24.58±0.27 <sup>d</sup>	17.79±1.31 <sup>c</sup>	19.28±1.60 <sup>c</sup>	26.38±0.49 <sup>e</sup>	27.02±1.39 <sup>e</sup>	13.92±1.17 <sup>b</sup>	10.2±0.25 <sup>a</sup>	8.32±1.44 <sup>a</sup>	9.82±0.26 <sup>a</sup>	9.07±0.27 <sup>a</sup>	9.93±1.29 <sup>a</sup>



[illegible]

dihydro-5-pentyl-2(3H)-Furanone	1362	7.83±0.15 <sup>f</sup>	2.84±0.17 <sup>a</sup>	5.15±0.63 <sup>d</sup>	3.83±0.63 <sup>bc</sup>	9.06±0.17 <sup>g</sup>	6.00±0.60 <sup>e</sup>	4.38±0.50 <sup>c</sup>	3.08±0.54 <sup>ab</sup>	3.07±0.51 <sup>ab</sup>	5.79±0.36 <sup>de</sup>	3.60±0.26 <sup>abc</sup>
10-Undecenoic acid, methyl ester	1371	13.9±0.39	14.65±1.05	16.25±1.70	—	16.55±1.88	—	—	—	—	—	—
Propanoic acid, 2-methyl-, (E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-Buten-1-one	1380	0.99±0.07 <sup>a</sup>	1.09±0.03 <sup>a</sup>	3.45±0.50 <sup>bc</sup>	4.33±0.05 <sup>cd</sup>	5.16±0.73 <sup>d</sup>	2.87±0.43 <sup>b</sup>	1.54±0.30 <sup>a</sup>	9.35±1.48 <sup>e</sup>	3.96±0.54 <sup>c</sup>	4.34±0.17 <sup>cd</sup>	3.98±0.43 <sup>c</sup>
	1388	3.38±0.01 <sup>ab</sup>	4.05±0.39 <sup>bc</sup>	5.4±0.48 <sup>d</sup>	5.69±0.69 <sup>d</sup>	6.73±0.80 <sup>e</sup>	4.62±0.07 <sup>c</sup>	2.99±0.01 <sup>a</sup>	2.79±0.25 <sup>a</sup>	3.10±0.26 <sup>a</sup>	2.82±0.01 <sup>a</sup>	2.93±0.36 <sup>a</sup>
1-Tetradecene	1392	—	—	0.62±0.11	—	—	—	2.99±0.07	—	1.20±0.24	—	1.98±0.32
6,10-dimethyl-2-Undecanone [3R-(3α,3aβ,7β,8α)]-	1407	3.55±0.02	3.94±0.33	4.05±0.34	—	6.08±0.39	5.47±0.68	—	4.02±0.26	4.20±0.05	—	—
2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-Methanoazulene	1408	—	—	17.11±2.37	20.25±3.83	16.42±1.83	20.17±3.77	6.75±0.57	6.85±1.16	6.44±0.97	10.93±0.46	18.69±3.47
Dodecanal	1412	—	1.42±0.20	—	4.66±0.65	1.25±0.20	1.18±0.09	0.84±0.14	0.98±0.09	—	2.45±0.14	1.27±0.02

Longifolene	1412	—	—	—	—	4.11±0.	2.94±0.	4.58±0.	3.23±0.	—	3.40±0.	1.43±0.
	.6					66	54	39	43		71	16
α-Ionone	1421	15.43± 2.62 <sup>b</sup>	15.14± 0.62 <sup>b</sup>	15.13± 1.86 <sup>b</sup>	22.50± 4.34 <sup>c</sup>	20.08± 1.97 <sup>c</sup>	12.99± 0.56 <sup>ab</sup>	10.08± 0.28 <sup>a</sup>	11.30± 1.48 <sup>a</sup>	10.96± 0.53 <sup>a</sup>	13.04± 2.33 <sup>ab</sup>	15.44± 1.88 <sup>b</sup>
6-Methyl-6-(5-methylfuran-2-yl)heptan-2-one	1426	—	—	3.79±0 .44	33.09± 5.04	—	2.83±0. 31	—	—	—	—	—
4-(2,2,6-trimethyl-7-oxabicyclo[4.1.0]hept-1-yl)-3-Buten-2-one	1428	—	—	8.27±1 .49	—	—	—	—	—	—	2.53±0. 35	—
Ionone	1429	—	—	23.66± 0.28	—	—	19.49± 1.88	10.24± 0.92	4.26±0. 54	—	4.04±0. 52	—
4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2-Butanone	1433	4.48±0. 36	—	2.48±0 .32	2.75±0. 24	—	—	—	—	—	—	3.73±0. 25
6,10-dimethyl-5,9-Undecadien-2-one	1434	34.61± 6.73 <sup>d</sup>	29.03± 0.59 <sup>c</sup>	31.08± 3.02 <sup>cd</sup>	16.66± 2.97 <sup>ab</sup>	32.01± 3.25 <sup>cd</sup>	20.95± 0.92 <sup>b</sup>	11.81± 0.46 <sup>a</sup>	13.46± 1.74 <sup>a</sup>	12.94± 0.14 <sup>a</sup>	14.56± 0.89 <sup>a</sup>	14.19± 2.36 <sup>a</sup>
4-(2,6,6-Trime-thylcyclohexa-1,3-dienyl)but-3-en-2-one	1440	8.04±0. 23 <sup>a</sup>	13.17± 0.81 <sup>b</sup>	17.77± 2.81 <sup>c</sup>	23.54± 1.55 <sup>d</sup>	26.62± 2.64 <sup>e</sup>	19.55± 0.75 <sup>c</sup>	11.73± 0.86 <sup>b</sup>	11.58± 1.50 <sup>b</sup>	13.08± 0.23 <sup>b</sup>	11.62± 0.47 <sup>b</sup>	13.19± 2.58 <sup>b</sup>

trans-β-Ionone	1457	61.66± 2.27 <sup>c</sup>	59.18± 2.87 <sup>c</sup>	63.9±9 .36 <sup>c</sup>	56.33± 5.05 <sup>c</sup>	75.95± 5.35 <sup>d</sup>	47.80± 1.19 <sup>b</sup>	35.30± 2.34 <sup>a</sup>	28.51± 3.80 <sup>a</sup>	32.33± 0.55 <sup>a</sup>	28.8±1. 16 <sup>a</sup>	31.45± 5.12 <sup>a</sup>
1-Dodecanol	1457	3.56±0. 06 <sup>a</sup>	5.59±0. 20 <sup>b</sup>	6.27±0 .75 <sup>bc</sup>	5.68±0. 74 <sup>b</sup>	9.00±0. 62 <sup>d</sup>	7.30±0. 22 <sup>c</sup>	5.71±0. 46 <sup>b</sup>	5.73±1. 13 <sup>b</sup>	7.46±0. 68 <sup>c</sup>	6.96±0. 93 <sup>c</sup>	7.22±0. 24 <sup>c</sup>
(+)-Valencene	1491	4.85±0. 33	4.41±0. 29	5.4±0. 91	— —	4.94±0. 35	2.21±0. 23	2.57±0. 09	2.00±0. 32	— —	— —	— —
cis-hexahydro- 8a-methyl-1,8( 2H,5H)-Naphth alenedione	1517	28.42± 0.95	— —	— —	— —	— —	22.57± 0.2	— —	— —	16.95± 0.67	— —	— —
Butylated Hydroxytoluene (R)-5,6,7,7a-te trahydro-4,4,7a -trimethyl-2(4 H)-Benzofuran one, (E)-3,7,11-tri methyl-1,6,10- Dodecatrien-3- ol	1517 .5 1525 1551	1.39±0. 13 31.72± 1.51 <sup>ab</sup> 4.31±0. 14	1.50±0. 08 33.55± 3.10 <sup>abc</sup> 7.80±0. 22	1.66±0 .30 43.40± 6.44 <sup>bc</sup> — —	1.03±0. 02 72.09± 14.23 <sup>d</sup> — —	0.99±0. 09 72.4±1 0.57 <sup>d</sup> — —	0.66±0. 13 45.21± 6.16 <sup>c</sup> 7.56±0. 24	— — 33.06± 1.47 <sup>abc</sup> — —	— — 30.34± 5.95 <sup>a</sup> — —	— — 44.20± 5.88 <sup>bc</sup> 4.03±0. 20	— — 34.16± 1.14 <sup>abc</sup> — —	— — 33.48± 1.59 <sup>abc</sup> 4.24±0. 15
2,4-Di-tert-but ylphenol	1555	16.86± 1.65 <sup>a</sup>	19.54± 1.14 <sup>ab</sup>	21.46± 3.21 <sup>abc</sup>	19.50± 3.05 <sup>ab</sup>	35.94± 2.87 <sup>d</sup>	26.11± 0.39 <sup>c</sup>	22.37± 1.31 <sup>bc</sup>	19.52± 2.73 <sup>ab</sup>	24.38± 3.57 <sup>bc</sup>	24.94± 4.67 <sup>c</sup>	24.68± 3.04 <sup>bc</sup>
n-Nonylcycloh exane	1556	—	—	—	—	—	—	—	—	4.66±0. 29	6.94±0. 95	6.10±0. 88

Methanone, dicyclohexyl–	1576	18.32± 0.71 <sup>bcd</sup>	18.43± 1.31 <sup>bcd</sup>	21.86± 3.22 <sup>d</sup>	21.84± 4.21 <sup>d</sup>	28.70± 3.46 <sup>e</sup>	19.76± 0.95 <sup>bcd</sup>	16.31± 2.43 <sup>abc</sup>	12.81± 2.04 <sup>a</sup>	18.14± 2.48 <sup>bcd</sup>	15.45± 0.71 <sup>ab</sup>	20.52± 3.81 <sup>cd</sup>
2,2,4–Trimethyl –1,3–pentanedi ol diisobutyrate	1587 .5	7.82±0. 15 <sup>b</sup>	15.79± 0.66 <sup>g</sup>	16.20± 0.46 <sup>g</sup>	10.78± 0.20 <sup>de</sup>	9.14±0. 68 <sup>bc</sup>	20.42± 0.46 <sup>h</sup>	5.73±0. 87 <sup>a</sup>	10.15± 1.67 <sup>cd</sup>	11.94± 0.60 <sup>e</sup>	13.91± 0.21 <sup>f</sup>	13.90± 1.77 <sup>f</sup>
Cedrol	1607 .9	–	11.23± 0.02	18.63± 1.21	7.36±1. 05	17.59± 1.29	12.45± 0.08	15.94± 0.56	30.98± 4.02	30.57± 2.25	37.09± 0.57	31.47± 4.95
Tetradecanal	1614	–	–	–	1.63±0. 05	–	–	5.98±0. 23	–	–	–	7.23±1. 46
Benzophenone	1664	–	–	14.89± 2.63	3.83±0. 12	9.30±0. 49	11.12± 1.08	–	8.18±0. 94	10.74± 0.29	7.49±1. 23	7.25±0. 74
2,2',5,5'–tetram ethyl–1,1'–Biph enyl	1668 .5	–	–	–	–	–	–	1.56±0. 09	1.22±0. 18	–	1.22±0. 02	1.39±0. 16
2–hexyl–1–Dec anol	1790	5.40±0. 18	–	–	–	–	–	–	–	6.05±0. 77	9.29±0. 05	6.56±1. 18
3,4–diethyl–1,1 '–Biphenyl	1792	–	11.24± 0.26	–	–	–	28.4±1. 82	–	12.51± 1.53	–	–	10.7±0. 49
Neophytadiene	1840	21.12± 0.02 <sup>e</sup>	22.90± 2.62 <sup>ef</sup>	25.74± 5.10 <sup>f</sup>	16.80± 1.99 <sup>cd</sup>	25.51± 0.77 <sup>f</sup>	19.01± 2.47 <sup>de</sup>	13.37± 2.20 <sup>bc</sup>	13.39± 2.31 <sup>bc</sup>	16.89± 0.72 <sup>cd</sup>	11.20± 0.05 <sup>ab</sup>	8.99±1. 41 <sup>a</sup>
Dodecylcyclohe xane	1864	2.73±0. 36 <sup>a</sup>	3.48±0. 13 <sup>ab</sup>	8.83±1 .48 <sup>e</sup>	6.67±0. 73 <sup>d</sup>	4.66±0. 41 <sup>bc</sup>	6.84±0. 55 <sup>d</sup>	5.97±0. 20 <sup>cd</sup>	4.67±0. 68 <sup>bc</sup>	4.80±0. 75 <sup>bc</sup>	5.84±0. 95 <sup>cd</sup>	4.01±0. 55 <sup>b</sup>
Phytol	2045	16.50± 1.15 <sup>de</sup>	24.40± 2.06 <sup>f</sup>	23.47± 1.53 <sup>f</sup>	14.73± 2.26 <sup>cd</sup>	16.69± 1.21 <sup>de</sup>	18.51± 3.07 <sup>e</sup>	14.36± 2.81 <sup>cd</sup>	11.28± 2.02 <sup>bc</sup>	13.83± 0.87 <sup>cd</sup>	8.48±1. 24 <sup>ab</sup>	7.63±0. 99 <sup>a</sup>
Decanoic acid, methyl ester	1282	–	–	–	16.38± 1.25	–	14.87± 1.95	10.06± 0.38	9.18±0. 42	–	–	–

n-Hexadecanoic acid	1968	—	—	—	—	40.59± 4.43	—	—	—	—	—	—	—
1-Decanol	1258	—	—	—	—	9.67±0. 92	5.48±0. 3	—	4.07±0. 29	—	—	—	—
Sulfurous acid, butyl tetradecyl ester	2434	3.34±0. 56	2.15±0. 19	—	—	2.22±0. 20	1.87±0. 08	—	—	—	1.25±0. 15	1.33±0. 12	—

<sup>a</sup> RI =Retention index of aroma compounds on HP-5MS UI Column; RI were obtained from NIST Chemistry WebBook.(<https://webbook.nist.gov/chemistry/name-ser/>)

<sup>b</sup> Concentrations of aroma compounds in T0, T1, T2,T3, T4, T5, T6, T7, T8, T9 and T10 were represented RAPT samples from eleven different aging years, respectively; values with different letters (a–h) in a row are significantly using Duncan’s multiple comparison tests (  $p < 0.05$  ).

<sup>c</sup> All the above aroma compounds were identified by MS and RI values, except. Phytol, Decanoic acid, methyl ester, n-Hexadecanoic acid , 1-Decanol and Sulfurous acid, butyl tetradecyl ester is identified by MS

**Table S2**

Key volatile compounds identified in RAPT samples from different years of storage

Volatile compounds	Class	Odor	Thresho ld(μg/kg)	OAV											ACI(%)
				T0	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	
DL-Menthol	Woody	mint-like, woody	1000	0.5	0.6	0.7	0.8	0.7	0.5	0.5	0.5	0.5	0.4	1.8	<0

[illegible]

Octanoic acid	Cheese flavor	Carrot-like, musty Cheese, fat Flowery	190	0.7	0.8	1.4	1.6	1.7	1.3	0.2	0.4	0.4	0.5	0.8	<0
$\alpha$ -Ionone	Floral	' violet-like Lilac and hyacinth-like	0.4	385.8	378.5	378.1	562.5	501.9	324.9	251.9	282.4	274.1	326	386	0.06~ 0.62
Benzeneacetal dehyde	Floral		4	29.8	24.9	30	56.7	56.1	29.1	30.6	30.6	48.1	35.3	42.9	0~0.0 6
2,6,6-trimethyl-1,3-Cyclohexadiene-1-carboxaldehyde	Woody	Woody, herbal	3	82.2	73.7	88.1	108.4	118.8	91.6	69.4	48.9	59.9	54.3	53.5	0.01~ 0.12
(E,E)-2,4-Heptadienal	Floral	Fatty, flowery	0.032	3598.6	3248.6	3338.5	4774.2	5892	3473.1	4117.8	3857.1	4501.8	4416.6	4351.2	0.55~ 7.76
1,2-dimethoxy-Benzene	Stale	Sweet and Musty	3.17	20.5	37.4	53.2	54.2	54.4	51.1	30.5	26.1	25.2	33.6	42.7	0.01~ 0.06
(Z)-3,7-dimethyl-2,6-Octadien-1-ol	Floral&fruity	Citrus-like,Floral	49	2.7	3.2	4.3	6.2	5.9	4.1	2.5	2.6	3.3	2.9	2.7	0~0.0 1



6-methyl-5-Hepten-2-one	Fruity	Citrus-like, apple-like	50	3.9	3	2.6	3.3	4.4	3.5	2.2	2	1.9	2.7	2.6	0~0.01
1-Octanol	Floral&fruity	Rose-like or lemon-like	0.8	255.1	317.3	346	620.8	497.9	336.4	106.6	95.2	158.4	126.8	131.8	0.06~0.64
Nonanoic acid	Stale	Moldy, pungent	26	9	8.6	15.8	14	16.8	11.1	3.6	4.1	5.6	6	4.3	0~0.01
2,6,6-trimethyl-1-Cyclohexene-1-carboxaldehyde	—	—	5	49.2	35.6	38.6	52.8	54	27.8	20.4	16.6	19.6	18.1	19.9	0.01~0.05
1-Octen-3-ol	Green	Mushroom-like, green	45	21.3	11.5	5.9	5.1	8.2	4.8	2.6	2.7	2.8	3.8	3.4	0~0.01
1-(1H-pyrrol-2-yl)-Ethanol	Nutty	Nutty, musty	3.4	41.2	39.3	39	75.9	68	49	34.8	35.3	38.1	36.4	29.2	0.01~0.08
Octanal	Fruity	Citrus-like, soapy	0.0455	1600.9	1455.3	1320.7	1376.8	4131.4	2432.5	1534.7	1365	1880.6	1836.4	1632.4	0.25~3.52
1-Dodecanol	Fatty	Fatty, soapy	6.1	5.8	9.2	10.3	9.3	14.8	12	9.4	9.4	12.2	11.4	11.8	0~0.02

1-Nonanol	Floral	rose-like	11	9.8	7.6	10.5	15.8	17.9	9.5	8.2	7.3	6.3	7	5.9	0~0.02
Heptanal	Fatty	Citrus-like, fatty	9.7	4.7	4.7	8	6.9	9	7.3	7.2	3.5	7.8	5.9	5.3	0~0.01
Isophorone	Woody	Woody Coconut, creamy,	3000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0
Dihydro-5-pentyl-2(3H)-Furanone	Cheese flavor	waxy with fatty milky notes	4.5	17.4	6.3	11.5	8.5	20.1	13.3	9.7	6.8	6.8	12.9	8	0~0.02
(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-Buten-1-one	Floral&fruity	apple-like, rose-like	1000	<0.1	<0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0
2-Heptanone	Fruity	cabbage-like	70	0.6	0.6	0.4	0.5	0.8	0.7	0.4	0.3	0.4	0.6	0.3	<0
3-methyl-Butanoic acid	Cheese flavor	Cheese-like	10000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0
1-Hexanol	Green	Green, grassy	40	1.4	1.4	0.8	1	1.2	0.8	0.6	0.5	0.8	0.4	0.6	<0

p-Xylene	Chemical	Plastic, green,	60	0.3	0.3	0.3	1	0.7	0.3	0.4	0.4	0.5	0.4	0.4	<0
2-methyl-Butanoic acid	Cheese flavor	Butter, cheese-like	15	3.4	3	1.6	2.2	2.1	1.7	0.4	0.7	0.4	0.9	1	<0
$\alpha$ -Pinene	Woody	Fresh, woody	48	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	<0
(Z)-3-Hexen-1-ol	Green	Grass	0.0002	151243.8	145866.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0~40.33
1-ethyl-1H-Pyrrole	Roasted	Burnt, roasted	3	4.6	3.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0
Methyl salicylate	Green	wintergreen	10	39.3	29.7	35.3	37.5	ND	ND	ND	ND	ND	ND	ND	0~0.04
Phenylethyl Alcohol	Floral&fruity	Rose-like	9	24.9	21.9	29.4	38	35.7	19.1	ND	14	7	15.3	ND	0~0.04
$\beta$ -Myrcene	Woody	Pepper-like,carrot-like	0.75	ND	239.3	ND	ND	ND	280.2	ND	ND	ND	215.1	171.3	0~0.41
Tetradecanal	Chemical	Alkane	60	ND	ND	ND	0.3	ND	ND	1	ND	ND	ND	1.2	<0
1-Decanol	Floral&fruity	orange-like, floral	23	ND	ND	ND	ND	4.2	2.4	ND	1.8	ND	ND	ND	<0
Naphthalene	Chemical	pungent dry tarry	50	0.5	0.7	0.9	ND	1.6	ND	ND	ND	0.8	ND	ND	<0

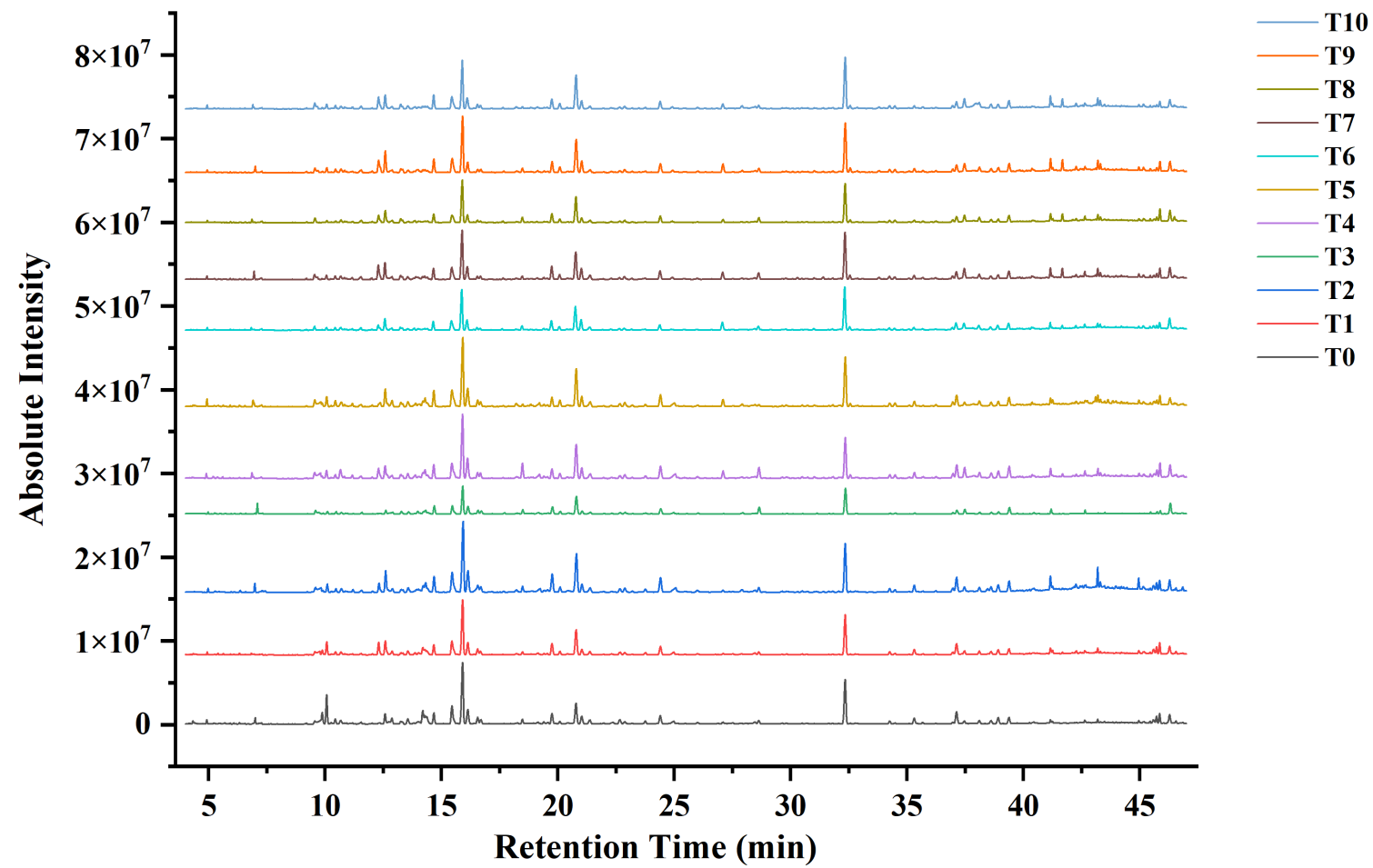
2,3-dihydro- Benzofuran	Chemical	Tar-like , pungent	48	1.3	1.1	1.2	1.6	1.7	1	0.9	0.6	0.9	ND	ND	<0
1-Oxaspiro[4. 5]dec-6-ene, 2,6,10,10-tetr amethyl-	Woody	Herbal	0.0002	329594. 6	345510	259316. 6	ND	ND	220607. 8	ND	ND	128021. 3	ND	180540. 2	0~76. 48
Benzyl alcohol	Floral&fr uity	Rose-li ke, cherry-l ike Flowery	5500	<0.1	ND	ND	<0.1	ND	ND	ND	ND	ND	ND	ND	<0
Ionone	Floral	, violet-li ke	1500	ND	ND	0.2	ND	ND	0.1	0.1	<0.1	ND	<0.1	ND	<0
(E)-2-Octena l	Green	Green	3	ND	ND	ND	ND	ND	ND	ND	7	ND	9.6	ND	0~0.0 2
2,6-dimethox y-Phenol	Chemical	phenolic , smoky, woody	400	v	<0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0
(E,E)-2,6-No nadienal	Green	cucumb er-like, grren	1	ND	ND	ND	ND	ND	18.9	ND	13.8	ND	ND	14.9	0~0.0 3
Dodecanal	Green	Green,s oapy,citr us-like	1.07	ND	13.3	ND	43.5	11.7	11.1	7.8	9.2	ND	22.9	11.9	0~0.0 4

Indole	Floral	Floral, animal– like	500	0.1	ND	<0.1	ND	ND	ND	ND	ND	<0.1	<0.1	ND	<0
Hexanoic acid, methyl ester	Fruity	Pine apple–li ke	10	ND	ND	ND	ND	1	ND	0.4	2.4	0.5	ND	ND	<0
2–Octanone	Woody	Woody, Herbal	50	0.1	ND	ND	ND	ND	0.3	ND	ND	ND	ND	ND	<0
2–butoxy–Eth anol	–	–	2600	ND	<0.1	ND	ND	<0.1	ND	<0.1	<0.1	<0.1	<0.1	<0.1	<0
Hexanal	Green	Green	9	ND	0.5	6.7	ND	ND	1.5	0.5	0.6	0.6	0.7	0.7	<0
1,2,3–Trimeth oxybenzene	Stale	Stale and Musty	0.75	ND	ND	31.1	ND	46.3	33.6	38.4	28.5	12.3	35.7	25.3	0–0.0 7

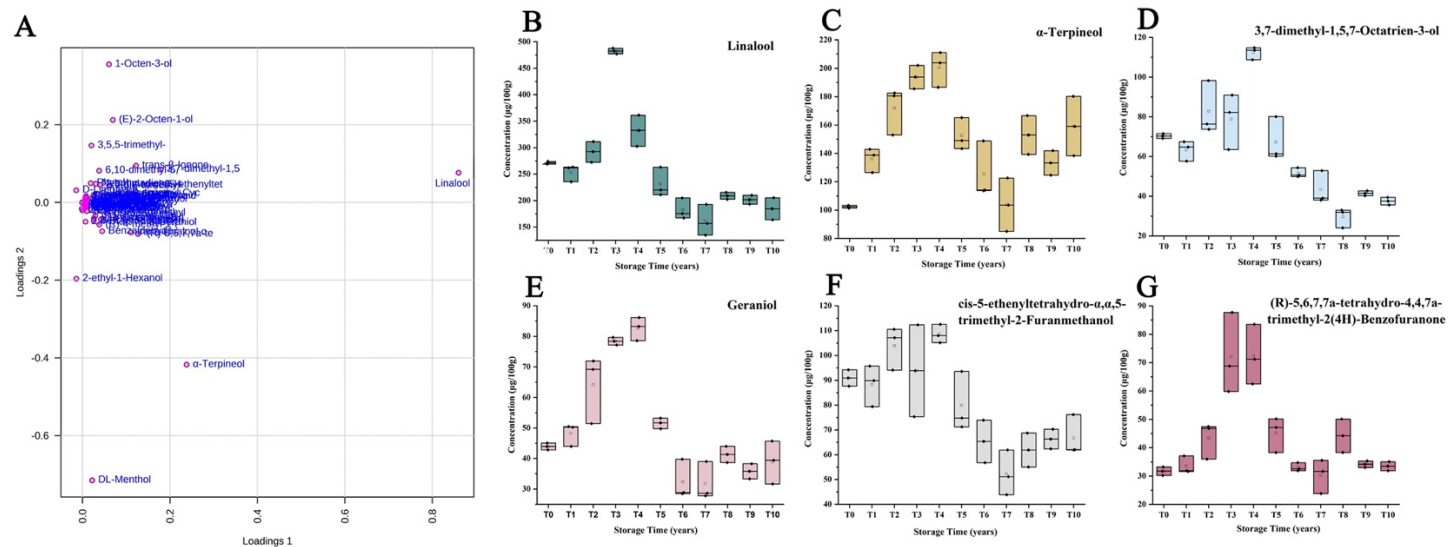
<sup>a</sup> OT = Odor thresholds

<sup>b</sup> ND, the compounds was not detected

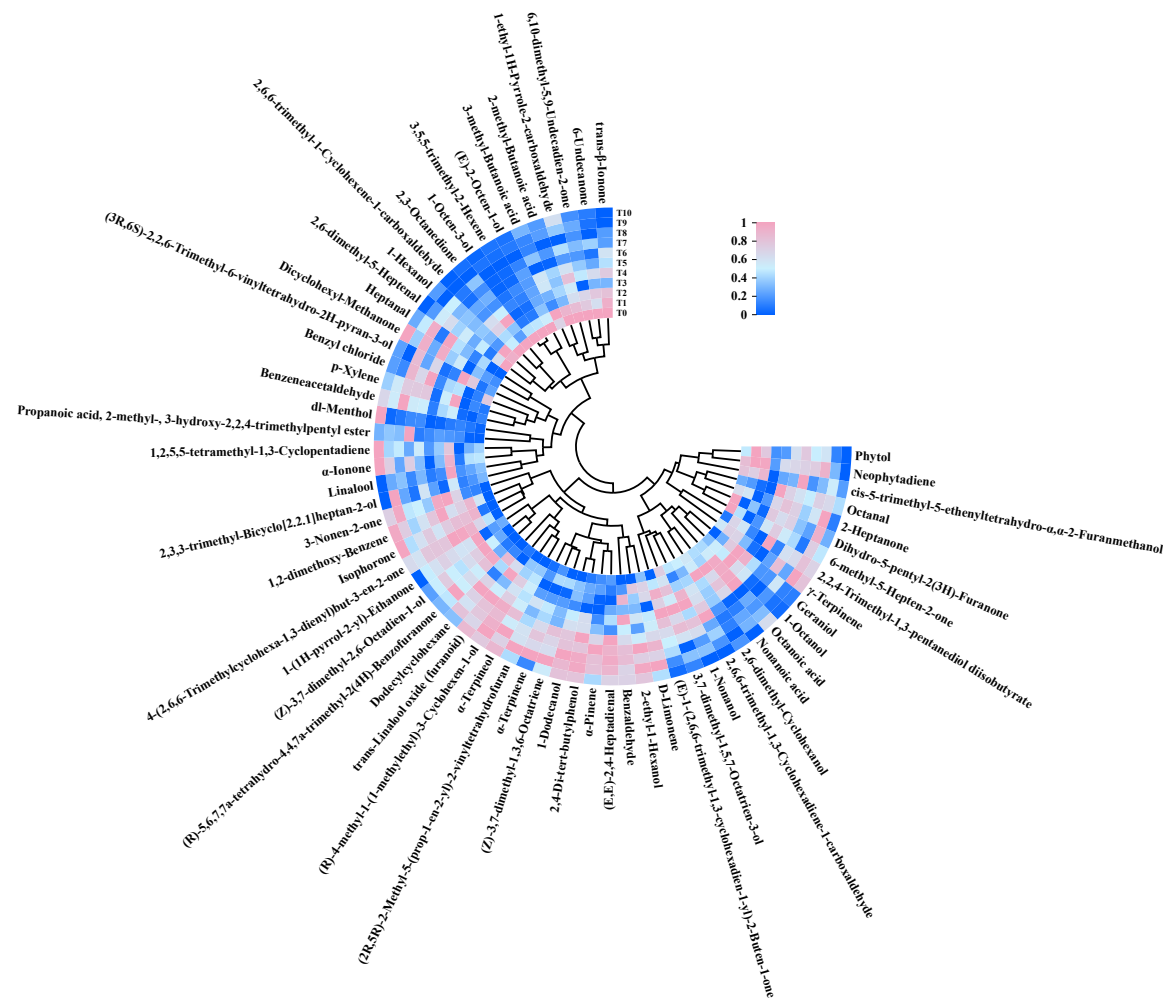
<sup>c</sup> All the odor thresholds were obtained from previous research [9, 27, 36 – 39].



**Figure S1** Total ion chromatograms (TIC) of aroma compounds in RAPT



**Figure S2** Multivariate statistical analysis of volatile compounds and during RAPT storage (a) loadings plot (b–g) Comparison of the accurate contents of differential compounds screened by loadings plot





**Figure S3** Heat map of differential volatile compounds in the samples of RAPT at various storage time points (Relative content)