

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Lucky Strike Double Click Yellow	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.963	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.56	100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O		0.68	100.00
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		0.29	100.00
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.55	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.48	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.43	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		57.92	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16		22.74	100.00
28	35	β-Pinene	127-91-3	C10H16		56.99	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		1.41	82.67
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA
36	45	1,4-Cineol	470-67-7	C10H18O		1.63	100.00
37	46	Limonene	138-86-3	C10H16		303.69	100.00
38	47	p-Cymene	99-87-6	C10H14		41.52	100.00

39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		228.51	100.00
41	50 γ -Terpinene	99-85-4	C10H16		5.87	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2		3.80	88.04
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		9.90	85.85
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2		1.39	100.00
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		1.43	75.46
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2		2.57	100.00
54	67 Acetophenone	98-86-2	C8H8O		0.42	100.00
55	68 Linalool	78-70-6	C10H18O		174.99	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.74	83.89
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O		2.35	100.00
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O		1.23	100.00
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		11.99	87.16
64	79 β -Citronellal	106-23-0	C10H18O		24.15	100.00
65	80 Isopulegol	89-79-2	C10H18O		29.05	88.91
66	82 Benzyl acetate	140-11-4	C9H10O2		0.47	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		965.58	99.91
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		137.05	98.54
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		140.09	100.00
73	90 Menthol	15356-70-4	C10H20O		15719.61	87.57
74	94 Estragole (4-allyanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O		7.89	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		10.77	92.53
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		1.84	100.00

85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		886.51	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		205.01	98.79
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O		51.26	100.00
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		3.23	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2		1.71	100.00
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2		0.68	100.00
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		9589.47	99.84
100	125 Geraniol Acetate	105-87-3	C12H20O2		13.28	100.00
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		2.38	82.33
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		67.67	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2		25.73	100.00
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O		1.09	100.00
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.89	100.00
117	149 Vanillin	121-33-5	C8H8O3		2.29	34.34
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		2.58	32.08
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		19.03	100.00
125	159 Acetyleugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafro Eugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2		12.45	100.00
130	167 γ -Undecalactone	104-67-6	C11H20O2		1.95	39.02

131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		6.00	29.36
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO		86.41	9.74
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Lucky Strike Double Click Violet	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)	0.949		
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND	NA	
2	3	Hydroxyacetone	116-09-6	C3H6O2		2.04	100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND	NA	
4	6	Acetoin	513-86-0	C4H8O2	ND	NA	
5	8	Isopentyl Alcohol	123-51-3	C5H12O		0.68	100.00
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND	NA	
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND	NA	
8	11	1-Pentanol	71-41-0	C5H12O	ND	NA	
9	13	Ethyl butanoate	105-54-4	C6H12O2		0.36	100.00
10	14	Hexanal	66-25-1	C6H12O	ND	NA	
11	15	Butyl Acetate	123-86-4	C6H12O2	ND	NA	
12	16	Ethyl lactate	97-64-3	C5H10O3	ND	NA	
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		33.50	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		17.70	100.00
15	19	Furfural	98-01-1	C5H4O2		0.87	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		85.24	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		20.26	100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND	NA	
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND	NA	
20	24	1-Hexanol	111-27-3	C6H14O	ND	NA	
21	25	Furfuryl alcohol	98-00-0	C5H6O2		2.07	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND	NA	
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.38	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		34.72	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND	NA	
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND	NA	
27	34	β-Myrcene	123-35-3	C10H16		11.82	100.00
28	35	β-Pinene	127-91-3	C10H16		41.21	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2		30.54	100.00
30	37	Ethyl hexanoate	123-66-0	C8H16O2		36.15	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		0.83	100.00
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND	NA	
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND	NA	
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND	NA	
35	43	Hexyl acetate	142-92-7	C8H16O2		18.87	100.00

36	45 1,4-Cineol	470-67-7	C10H18O		1.46	100.00
37	46 Limonene	138-86-3	C10H16		138.89	99.75
38	47 p-Cymene	99-87-6	C10H14		15.48	100.00
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		149.85	100.00
41	50 γ-Terpinene	99-85-4	C10H16		1.15	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2		12.72	100.00
45	54 Corylone	765-70-8	C6H8O2		2.82	87.87
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		3.60	82.88
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2		26.41	100.00
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		1.02	73.05
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.40	100.00
55	68 Linalool	78-70-6	C10H18O		13.80	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.03	81.49
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		12.12	88.43
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		27.56	89.82
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.30	100.00
68	85 p-Menthone	10458-14-7	C10H18O		912.83	99.77
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		140.51	98.27
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		153.37	100.00
73	90 Menthol	15356-70-4	C10H20O		15029.67	89.03
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O		6.30	94.02
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2		17.18	100.00
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		9.54	92.11
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		2.78	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		327.04	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		193.20	98.62
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		2.40	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		8653.46	99.82
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		1.24	83.43
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		69.15	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O		24.34	100.00
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O		1.49	77.11
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.42	100.00
117	149 Vanillin	121-33-5	C8H8O3		2.31	37.84
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		11.66	100.00
121	155 Ethyl Vanillin	121-32-4	C9H10O3		3.04	43.67

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		25.71	100.00
125	159 Acety Eugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroegenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		27.40	96.38
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		6.07	40.83
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO		116.56	21.16
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Marlboro Double Burst	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.919	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.94	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.74	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.90	85.33
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		7.15	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16		2.18	100.00
28	35	β-Pinene	127-91-3	C10H16		8.26	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		10.33	90.43
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.78	100.00
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16		15.89	96.89
38	47 p-Cymene	99-87-6	C10H14		2.71	90.26
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		41.62	94.70
41	50 γ -Terpinene	99-85-4	C10H16		0.94	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		126.27	87.64
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.34	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2		0.34	100.00
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.25	100.00
55	68 Linalool	78-70-6	C10H18O		4.02	82.78
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.64	82.56
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2		0.23	100.00
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		2.03	80.55
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		28.72	93.58
66	82 Benzyl acetate	140-11-4	C9H10O2		5.70	92.49
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.29	100.00
68	85 p-Menthone	10458-14-7	C10H18O		938.35	96.68
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		76.87	87.40
71	88 Methyl phenylacetate	101-41-7	C9H10O2		0.31	100.00
72	89 4-Terpineol	20126-76-5	C10H18O		123.64	89.56
73	90 Menthol	15356-70-4	C10H20O		16598.62	88.23
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O		6.40	87.65
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3		0.30	100.00
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		1.65	100.00
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		13.89	90.04
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		18.13	88.19
87	109 Menthyl Acetate	16409-45-3	C12H22O2		96.83	85.71
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		13.10	93.21
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O		0.56	76.49
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		7204.15	99.81
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		0.25	100.00
102	129 Eugenol	97-53-0	C10H12O2		2.05	85.55
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		28.52	79.68
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		2.52	76.43
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		3.33	45.63

122	156 Coumarin	91-64-5	C9H6O2	ND	NA
123	157 Myristicin	607-91-0	C11H12O3	ND	NA
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA
135	172 Benzophenone	119-61-9	C13H10O	ND	NA
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Marlboro Purple Burst	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.912	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		39.22	100.00
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		48.79	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		0.31	100.00
15	19	Furfural	98-01-1	C5H4O2		0.92	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		31.40	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		6.08	100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.59	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		1.02	84.93
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		0.30	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16		0.49	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		43.42	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		1.49	87.66
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.54	100.00
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16		6.39	100.00
38	47 p-Cymene	99-87-6	C10H14		0.28	100.00
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		1.62	100.00
41	50 γ -Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4		0.46	100.00
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Allyl hexanoate	123-68-2	C9H16O2		22.60	100.00
47	57 Benzyl Alcohol	100-51-6	C7H8O		2.25	80.88
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.19	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.22	100.00
55	68 Linalool	78-70-6	C10H18O		5.67	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.14	82.77
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		8.45	96.72
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		17.76	87.88
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.42	100.00
68	85 p-Menthone	10458-14-7	C10H18O		97.76	98.81
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		11.71	86.34
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		20.49	100.00
73	90 Menthol	15356-70-4	C10H20O		15379.59	89.60
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O		1.04	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2		6.05	100.00
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.79	100.00
82	104 trans-Geraniol	106-24-1	C10H18O		11.87	100.00
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		0.46	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		4.83	88.54
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		0.74	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		40.20	100.00
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		7432.23	99.54
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		0.39	100.00
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		0.37	100.00
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		1.47	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		1.37	100.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2		21.68	100.00
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		17.54	100.00
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND		NA
123	157 Myristicin	607-91-0	C11H12O3	ND		NA
124	158 γ -Decalactone	706-14-9	C10H18O2	ND		NA
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND		NA
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND		NA
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND		NA
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND		NA
129	165 δ -Decalactone	705-86-2	C10H18O2		3.50	100.00
130	167 γ -Undecalactone	104-67-6	C11H20O2		6.91	100.00
131	168 Raspberry ketone	5471-51-2	C10H12O2		40.51	100.00
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND		NA
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND		NA
134	171 Benzyl ether	103-50-4	C14H14O	ND		NA
135	172 Benzophenone	119-61-9	C13H10O	ND		NA
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND		NA
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND		NA
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND		NA
139	178 Caffeine	58-08-2	C8H10N4O2	ND		NA
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND		NA
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND		NA
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND		NA

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Marlboro Dry Menthol	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.853	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		0.77	100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O		20.11	100.00
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		23.75	100.00
10	14	Hexanal	66-25-1	C6H12O		5.77	100.00
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.71	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		2.53	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.92	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.64	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		16.14	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16		18.38	100.00
28	35	β-Pinene	127-91-3	C10H16		18.71	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		35.69	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		13.30	97.90
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O		8.03	100.00
37	46 Limonene	138-86-3	C10H16		1795.07	99.95
38	47 p-Cymene	99-87-6	C10H14		33.18	100.00
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		5.82	100.00
41	50 γ -Terpinene	99-85-4	C10H16		65.80	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2		27.03	100.00
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		1983.72	99.71
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2		0.89	100.00
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2		0.89	100.00
54	67 Acetophenone	98-86-2	C8H8O	ND	NA	
55	68 Linalool	78-70-6	C10H18O		119.47	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.36	84.27
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O		3.72	100.00
60	75 Fenchol	1632-73-1	C10H18O		2.12	100.00
61	76 trans-Limonene oxide	6909-30-4	C10H16O		5.11	100.00
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		2.01	84.55
64	79 β -Citronellal	106-23-0	C10H18O		17.00	100.00
65	80 Isopulegol	89-79-2	C10H18O		17.54	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2		1.17	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2		1.80	100.00
68	85 p-Menthone	10458-14-7	C10H18O		17.88	92.39
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		6.09	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		22.26	100.00
73	90 Menthol	15356-70-4	C10H20O		16609.85	88.02
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O		64.36	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3		0.51	100.00
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.46	100.00
82	104 trans-Geraniol	106-24-1	C10H18O		4.12	100.00
83	105 Benzyl Propionate	122-63-4	C10H12O2		7.52	100.00
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2		3.73	100.00
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		4.48	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		4.23	83.18
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O		457.73	100.00
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		1.51	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2		2.71	100.00
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		8256.51	99.52
100	125 Geraniol Acetate	105-87-3	C12H20O2		3.39	100.00
101	127 Ethyl decanoate	110-38-3	C12H24O2		1.16	100.00
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		13.58	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		1.83	100.00
117	149 Vanillin	121-33-5	C8H8O3		0.61	100.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		0.77	100.00
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7		0.81	84.80

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Marlboro Splash Mega Purple	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.830	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2		25.08	100.00
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.21	100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND	NA	
4	6	Acetoin	513-86-0	C4H8O2	ND	NA	
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND	NA	
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND	NA	
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND	NA	
8	11	1-Pentanol	71-41-0	C5H12O	ND	NA	
9	13	Ethyl butanoate	105-54-4	C6H12O2		659.31	99.90
10	14	Hexanal	66-25-1	C6H12O	ND	NA	
11	15	Butyl Acetate	123-86-4	C6H12O2	ND	NA	
12	16	Ethyl lactate	97-64-3	C5H10O3	ND	NA	
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		142.27	99.83
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		0.49	100.00
15	19	Furfural	98-01-1	C5H4O2		0.77	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		68.82	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		18.15	100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O		40.55	100.00
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND	NA	
20	24	1-Hexanol	111-27-3	C6H14O	ND	NA	
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.82	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND	NA	
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.76	76.54
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		0.22	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND	NA	
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND	NA	
27	34	β-Myrcene	123-35-3	C10H16		1.01	100.00
28	35	β-Pinene	127-91-3	C10H16	ND	NA	
29	36	Butyl butyrate	109-21-7	C8H16O2	ND	NA	
30	37	Ethyl hexanoate	123-66-0	C8H16O2		157.99	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		2.89	88.65
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND	NA	
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2		49.14	100.00
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND	NA	
35	43	Hexyl acetate	142-92-7	C8H16O2		0.98	100.00

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16		12.66	98.12
38	47 p-Cymene	99-87-6	C10H14		0.51	100.00
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		3.13	100.00
41	50 γ -Terpinene	99-85-4	C10H16		0.39	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2		1.12	100.00
46	55 Allyl hexanoate	123-68-2	C9H16O2		50.26	100.00
47	57 Benzyl Alcohol	100-51-6	C7H8O		14.45	84.31
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2		0.95	100.00
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.40	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2		0.22	100.00
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2		0.95	100.00
54	67 Acetophenone	98-86-2	C8H8O		0.29	100.00
55	68 Linalool	78-70-6	C10H18O		89.45	99.50
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		3.01	81.16
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3		1.64	100.00
63	78 Phenethyl alcohol	60-12-8	C8H10O		15.91	97.38
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		7.07	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2		0.64	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2		2.26	100.00
68	85 p-Menthone	10458-14-7	C10H18O		5.10	88.29
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		2.45	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		8068.36	80.34
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O		0.98	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2		12.24	100.00
80	101 Ethyl Maltol	4940-11-8	C7H8O3		4.85	100.00
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.90	100.00
82	104 trans-Geraniol	106-24-1	C10H18O		26.77	100.00
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		4.33	74.50
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		19.40	93.24
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		104.13	100.00
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2		0.46	100.00
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		9340.83	99.56
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		1.75	100.00
102	129 Eugenol	97-53-0	C10H12O2		0.39	100.00
103	131 Methyl Anthranilate	134-20-3	C8H9NO2		5.83	100.00
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		24.38	100.00
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		1.53	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		10.10	100.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2		54.90	100.00
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		49.07	100.00
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		83.95	100.00
125	159 Acetylcugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2		7.09	100.00
130	167 γ -Undecalactone	104-67-6	C11H20O2		15.66	100.00
131	168 Raspberry ketone	5471-51-2	C10H12O2		92.30	100.00
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Marlboro Ice Blast	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.819	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.22	100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.57	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.16	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.90	86.40
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		6.73	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16		1.47	100.00
28	35	β-Pinene	127-91-3	C10H16		7.87	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		0.97	81.10
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16		14.37	100.00
38	47 p-Cymene	99-87-6	C10H14		1.40	100.00
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		33.13	100.00
41	50 γ -Terpinene	99-85-4	C10H16		0.93	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4		1.28	100.00
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		5.00	83.43
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.18	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2		0.11	100.00
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.25	100.00
55	68 Linalool	78-70-6	C10H18O		1.08	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.32	83.74
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.85	81.70
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		12.56	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		626.08	99.77
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		29.61	98.76
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		66.11	100.00
73	90 Menthol	15356-70-4	C10H20O		10721.80	84.97
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O		2.75	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3		0.14	100.00
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		1.30	100.00
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		7.21	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		1.77	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		50.92	96.68
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		5.74	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O		0.17	100.00
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		6202.20	99.75
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2		0.71	100.00
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		17.33	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		1.32	100.00
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND	NA
123	157 Myristicin	607-91-0	C11H12O3	ND	NA
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA
135	172 Benzophenone	119-61-9	C13H10O	ND	NA
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

Fruit				Cigarette	Mond Variance	Applemint	Menthol	% in Filter	
Mint related				Replicate #					2
				Sample Mass (g/cig)					0.590
#	Flavor List #	Compound Name	CAS Number	Formula					
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND			NA	
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND			NA	
3	5	Ethyl Propanoate	105-37-3	C5H10O2				2.79	100.00
4	6	Acetoin	513-86-0	C4H8O2	ND			NA	
5	8	Isopentyl Alcohol	123-51-3	C5H12O				5.94	100.00
6	9	Isobutyl Acetate	110-19-0	C6H12O2				1.51	100.00
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND			NA	
8	11	1-Pentanol	71-41-0	C5H12O	ND			NA	
9	13	Ethyl butanoate	105-54-4	C6H12O2				31.22	100.00
10	14	Hexanal	66-25-1	C6H12O				7.29	100.00
11	15	Butyl Acetate	123-86-4	C6H12O2				3.93	100.00
12	16	Ethyl lactate	97-64-3	C5H10O3	ND			NA	
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2				30.02	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2				1.00	100.00
15	19	Furfural	98-01-1	C5H4O2				0.66	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2				140.32	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2				31.84	100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND			NA	
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O				18.27	100.00
20	24	1-Hexanol	111-27-3	C6H14O				32.36	100.00
21	25	Furfuryl alcohol	98-00-0	C5H6O2				1.28	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND			NA	
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2				0.12	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16				30.35	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND			NA	
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND			NA	
27	34	β-Myrcene	123-35-3	C10H16				5.82	100.00
28	35	β-Pinene	127-91-3	C10H16				19.59	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND			NA	
30	37	Ethyl hexanoate	123-66-0	C8H16O2				18.06	100.00
31	38	Benzaldehyde	100-52-7	C7H6O				0.45	100.00
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND			NA	
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND			NA	
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND			NA	
35	43	Hexyl acetate	142-92-7	C8H16O2				98.56	100.00
36	45	1,4-Cineol	470-67-7	C10H18O	ND			NA	

37	46 Limonene	138-86-3	C10H16		44.31	100.00
38	47 p-Cymene	99-87-6	C10H14		1.75	100.00
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND		NA
40	49 Eucalyptol	470-82-6	C10H18O		2.69	100.00
41	50 γ -Terpinene	99-85-4	C10H16		0.66	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND		NA
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND		NA
44	53 Isoamyl Butyrate	106-27-4	C9H18O2		2.24	100.00
45	54 Corylone	765-70-8	C6H8O2	ND		NA
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND		NA
47	57 Benzyl Alcohol	100-51-6	C7H8O		1.91	80.60
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND		NA
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND		NA
50	61 cis-Linalool oxide	5989-33-3	C10H18O2		0.96	100.00
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		10.95	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND		NA
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND		NA
54	67 Acetophenone	98-86-2	C8H8O	ND		NA
55	68 Linalool	78-70-6	C10H18O		2.03	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.15	81.07
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND		NA
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND		NA
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND		NA
60	75 Fenchol	1632-73-1	C10H18O		0.32	100.00
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND		NA
62	77 Maltol	118-71-8	C6H6O3	ND		NA
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.17	85.09
64	79 β -Citronellal	106-23-0	C10H18O	ND		NA
65	80 Isopulegol	89-79-2	C10H18O		18.43	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2	ND		NA
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.31	100.00
68	85 p-Menthone	10458-14-7	C10H18O		211.59	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND		NA
70	87 Neomenthol	2216-52-6	C10H20O		56.45	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND		NA
72	89 4-Terpineol	20126-76-5	C10H18O		123.70	100.00
73	90 Menthol	15356-70-4	C10H20O		5952.18	99.99
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND		NA
75	96 α -Terpineol	10482-56-1	C10H18O		5.07	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND		NA
77	98 Methyl salicylate	119-36-8	C8H8O3	ND		NA
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND		NA
79	100 Linalyl acetate	115-95-7	C12H20O2	ND		NA
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND		NA

81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		4.29	100.00
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		6.97	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		3.58	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		26.96	100.00
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		8.51	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O		0.12	100.00
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		7151.95	99.66
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		0.59	100.00
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		0.21	100.00
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		7.63	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O		1.21	100.00
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.52	100.00
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	

125	159 Acetylugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2		0.29	100.00
127	163 Isosafroegenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		0.85	100.00
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Oris Pulse Super Slim Double Mix	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.536	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.42	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.79	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.28	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		14.67	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16		43.37	100.00
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		1.04	81.48
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA
36	45	1,4-Cineol	470-67-7	C10H18O	ND		NA

Fruit

Mint related

37	46 Limonene	138-86-3	C10H16		2358.16	99.99
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16		0.24	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		4.70	81.19
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.25	100.00
55	68 Linalool	78-70-6	C10H18O		68.21	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.83	81.46
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O		0.79	100.00
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O		0.54	100.00
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.38	81.89
64	79 β-Citronellal	106-23-0	C10H18O		1.47	100.00
65	80 Isopulegol	89-79-2	C10H18O		1.85	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2		0.22	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2		1.19	100.00
68	85 p-Menthone	10458-14-7	C10H18O		5.13	80.15
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		3593.89	72.90
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O		0.17	100.00
75	96 α-Terpineol	10482-56-1	C10H18O		5.84	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	

81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		0.52	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		2.36	65.68
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O		15.10	100.00
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		0.20	100.00
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		10.89	100.00
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		6582.16	99.89
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		0.87	100.00
102	129 Eugenol	97-53-0	C10H12O2		507.71	99.93
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		1.89	100.00
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		0.67	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	

125	159 Acetylugenol	93-28-7	C12H14O3		0.38	100.00
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND		NA
127	163 Isosafroeugenol	94-86-0	C11H14O2	ND		NA
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND		NA
129	165 δ -Decalactone	705-86-2	C10H18O2	ND		NA
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND		NA
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND		NA
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND		NA
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND		NA
134	171 Benzyl ether	103-50-4	C14H14O	ND		NA
135	172 Benzophenone	119-61-9	C13H10O	ND		NA
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND		NA
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND		NA
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND		NA
139	178 Caffeine	58-08-2	C8H10N4O2	ND		NA
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND		NA
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND		NA
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND		NA

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Oris Pulse Menthol Orange	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.544	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		9.61	100.00
10	14	Hexanal	66-25-1	C6H12O		2.08	100.00
11	15	Butyl Acetate	123-86-4	C6H12O2		1.86	100.00
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		3.24	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.45	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		69.33	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		13.83	100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O		31.39	100.00
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.67	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.16	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		14.43	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16		6.19	100.00
28	35	β-Pinene	127-91-3	C10H16		19.12	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		95.78	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		0.72	80.14
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2		130.66	100.00

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16		76.75	100.00
38	47 p-Cymene	99-87-6	C10H14		3.07	100.00
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		6.12	100.00
41	50 γ -Terpinene	99-85-4	C10H16		1.64	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2		19.73	100.00
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		2.52	81.34
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.20	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.16	100.00
55	68 Linalool	78-70-6	C10H18O		4.81	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.79	74.07
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		38.25	99.09
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		15.08	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		1.38	100.00
68	85 p-Menthone	10458-14-7	C10H18O		155.82	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		45.92	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		96.56	100.00
73	90 Menthol	15356-70-4	C10H20O		5501.49	99.99
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O		0.77	100.00
75	96 α -Terpineol	10482-56-1	C10H18O		3.06	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		3.83	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		269.99	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		37.85	100.00
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		5.83	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		1.11	100.00
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		7256.48	99.82
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		0.34	100.00
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2		107.44	100.00
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		5.51	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.50	100.00
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		0.20	100.00

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		1.30	100.00
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		0.89	100.00
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Richmond Coffee Superslim	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.500	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2		4.53	100.00
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.54	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.11	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.69	78.24
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2		0.46	100.00
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		2.48	86.36
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2		1.82	81.45
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2		10.84	81.98
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		21.55	81.60
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2		4.78	79.16
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.27	72.56
55	68 Linalool	78-70-6	C10H18O		0.48	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.19	73.14
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2		0.48	100.00
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.19	69.99
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		0.29	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.69	67.37
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		1.11	50.92
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2	ND	NA	
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		0.31	100.00
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		6.21	89.71
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		5729.96	99.18
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		0.65	59.42
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2		26.86	89.51
104	132 Piperonal	120-57-0	C8H6O3		223.14	91.09
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		10.03	89.13
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2		149.48	86.93
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		15.16	34.91
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		65.10	34.11

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2		1.88	48.15
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4		5.11	81.98
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		1.36	29.65
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2		2.46	0.00
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Richmond Cherry Superslim	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.514	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		3.28	53.58
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O		5.55	71.18
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.45	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		1.74	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.82	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		1.08	74.64
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		20.64	89.12
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2		3.05	74.36
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		12.44	76.64
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.42	72.17
55	68 Linalool	78-70-6	C10H18O		1.41	72.23
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.06	66.98
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.20	65.92
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		0.30	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		0.89	53.74
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.24	100.00
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		0.48	47.40
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		51.97	93.12
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		2.33	89.12
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		0.50	100.00
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		6231.91	99.36
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2		5.79	83.50
104	132 Piperonal	120-57-0	C8H6O3		43.52	88.34
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		14.07	87.09
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2		4.88	80.01
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2		0.21	0.00
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		2.39	29.76
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		0.90	30.30

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetylcugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		38.57	40.88
131	168 Raspberry ketone	5471-51-2	C10H12O2		11.34	3.22
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4		1.14	100.00
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		1.66	31.72
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Blue Ice Double Blast	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.587	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		52.20	100.00
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		20.50	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		19.89	100.00
15	19	Furfural	98-01-1	C5H4O2		0.37	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		18.13	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		4.19	100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.57	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2	ND		NA
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		2.12	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16		5.11	100.00
28	35	β-Pinene	127-91-3	C10H16		2.00	88.92
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		29.54	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		1.07	81.28
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16		25.08	97.97
38	47 p-Cymene	99-87-6	C10H14		2.85	88.33
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		23.29	80.18
41	50 γ -Terpinene	99-85-4	C10H16		0.72	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		15.52	80.43
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.24	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2		0.34	100.00
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.29	100.00
55	68 Linalool	78-70-6	C10H18O		4.82	86.66
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.89	75.04
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		2.53	90.35
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		18.54	89.83
66	82 Benzyl acetate	140-11-4	C9H10O2		0.47	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		130.33	85.28
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		30.83	78.06
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		43.97	100.00
73	90 Menthol	15356-70-4	C10H20O		9974.67	89.60
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O		2.96	77.50
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2		10.14	100.00
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		10.86	100.00
83	105 Benzyl Propionate	122-63-4	C10H12O2		7.51	100.00
84	106 Pulegone	89-82-7	C10H16O		6.36	81.85
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		140.35	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		47.51	68.11
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		4.95	86.11
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		22.57	100.00
94	117 Thymol	89-83-8	C10H14O		0.13	100.00
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		6642.82	99.19
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		12.12	65.59
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.52	100.00
117	149 Vanillin	121-33-5	C8H8O3		18.96	100.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		33.30	100.00
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		16.41	100.00
125	159 Acetylcugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		10.38	100.00
131	168 Raspberry ketone	5471-51-2	C10H12O2		59.28	100.00
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O		0.83	60.12
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO		24.36	9.77
142	182 Triethyl Citrate	77-93-0	C12H20O7		0.79	18.22

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Mond Strawberry Superslims	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.537	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		0.41	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.45	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O		27.05	84.11
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O		4.97	81.43
20	24	1-Hexanol	111-27-3	C6H14O		10.92	79.63
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.95	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.24	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2		2.05	81.60
30	37	Ethyl hexanoate	123-66-0	C8H16O2		0.61	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		4.90	88.86
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2		1.57	81.26
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2		2.13	76.36

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		165.91	85.78
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.26	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.23	100.00
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.22	77.58
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.04	77.87
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		3.00	91.61
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		1.10	54.39
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2		4.01	62.92
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2	ND	NA	
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		1.30	88.73
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		1.05	100.00
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2		78.21	91.07
99	124 Triacetin	102-76-1	C9H14O6		6015.81	99.49
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		20.24	88.39
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		228.21	89.95
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O		5.74	75.17
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O		1.93	69.56
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O		3.06	73.27
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		4.69	33.38
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		2.37	69.03
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		38.95	69.57
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2		49.19	5.70
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O		9.18	59.79
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		16.82	29.39
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

Fruit				Cigarette	Mond Variance Blueberry Menthol	% in Filter	
Mint related				Replicate #		2	
				Sample Mass (g/cig)			0.581
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		48.04	100.00
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		19.32	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		19.74	100.00
15	19	Furfural	98-01-1	C5H4O2		0.65	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		17.35	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		3.89	100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.19	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2	ND		NA
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		2.11	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16		2.95	100.00
28	35	β-Pinene	127-91-3	C10H16		3.66	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		30.41	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		0.41	100.00
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA
36	45	1,4-Cineol	470-67-7	C10H18O	ND		NA

37	46 Limonene	138-86-3	C10H16		24.13	100.00
38	47 p-Cymene	99-87-6	C10H14		2.06	100.00
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		11.99	100.00
41	50 γ-Terpinene	99-85-4	C10H16		0.57	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		1.92	82.34
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.20	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2		0.24	100.00
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.19	100.00
55	68 Linalool	78-70-6	C10H18O		2.64	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.10	78.77
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		2.59	91.78
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		11.19	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		55.07	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		12.59	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		23.49	100.00
73	90 Menthol	15356-70-4	C10H20O		7272.63	99.98
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O		1.25	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linalyl acetate	115-95-7	C12H20O2		9.93	100.00
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	

81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		10.76	100.00
83	105 Benzyl Propionate	122-63-4	C10H12O2		7.39	100.00
84	106 Pulegone	89-82-7	C10H16O		1.52	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		142.27	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		13.66	100.00
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		1.62	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		22.11	100.00
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		7742.28	99.61
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		6.32	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.51	100.00
117	149 Vanillin	121-33-5	C8H8O3		20.36	100.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		31.57	100.00
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		16.26	100.00

125	159 Acetylugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroegenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2			10.37 100.00
131	168 Raspberry ketone	5471-51-2	C10H12O2			59.99 100.00
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Mond Superslims Cherry	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.534	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O		3.50	76.55
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		0.54	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.48	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		2.35	80.80
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O		2.34	71.93
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.36	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.43	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		45.53	92.08
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2		0.45	100.00
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		95.63	85.07
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.64	71.22
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.44	100.00
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.85	83.36
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		3.72	80.11
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		3.97	92.25
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2		1.43	100.00
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		1.97	62.46
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.25	100.00
82	104 trans-Geraniol	106-24-1	C10H18O		0.25	100.00
83	105 Benzyl Propionate	122-63-4	C10H12O2		0.27	100.00
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		0.25	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		1.24	61.93
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		55.92	95.05
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		10.39	93.49
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2		0.34	100.00
99	124 Triacetin	102-76-1	C9H14O6		5432.18	99.74
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		121.65	93.62
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		34.10	92.60
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2		21.61	89.75
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O		1.21	64.20
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O		1.23	73.17
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2		1.13	31.16
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		7.40	41.51
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		1.02	67.65
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		180.35	60.33
131	168 Raspberry ketone	5471-51-2	C10H12O2		37.14	5.55
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4		2.21	100.00
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O		3.71	69.57
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		5.57	40.32
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Zest Marula	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.902	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		3.25	100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2		5.50	100.00
4	6	Acetoin	513-86-0	C4H8O2		2.98	100.00
5	8	Isopentyl Alcohol	123-51-3	C5H12O		1.27	100.00
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		21.29	100.00
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3		1.57	100.00
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		3.70	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		1.42	100.00
15	19	Furfural	98-01-1	C5H4O2		0.74	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		208.78	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		47.06	100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O		2.83	100.00
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.54	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.52	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		4.35	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16		2.00	100.00
28	35	β-Pinene	127-91-3	C10H16		3.91	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		4.07	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		1.33	85.19
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2		7.02	100.00

36	45 1,4-Cineol	470-67-7	C10H18O		0.31	100.00
37	46 Limonene	138-86-3	C10H16		16.59	100.00
38	47 p-Cymene	99-87-6	C10H14		1.54	100.00
39	48 γ -Pentalactone	108-29-2	C5H8O2		7.55	100.00
40	49 Eucalyptol	470-82-6	C10H18O		52.61	100.00
41	50 γ -Terpinene	99-85-4	C10H16		0.66	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O		13.01	92.67
44	53 Isoamyl Butyrate	106-27-4	C9H18O2		26.30	100.00
45	54 Corylone	765-70-8	C6H8O2		20.86	100.00
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		3.00	80.25
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.46	100.00
55	68 Linalool	78-70-6	C10H18O		0.96	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.98	78.39
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3		1.18	100.00
63	78 Phenethyl alcohol	60-12-8	C8H10O		2.08	81.02
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		8.87	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		5.13	87.17
68	85 p-Menthone	10458-14-7	C10H18O		107.18	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		18.72	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		28.59	100.00
73	90 Menthol	15356-70-4	C10H20O		5008.58	99.95
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O		1.86	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3		44.69	100.00
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.70	100.00
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		3.50	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2		0.61	100.00
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		23.97	100.00
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		3.21	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2		55.09	100.00
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		0.23	100.00
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		8759.19	99.75
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		3.68	87.50
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		106.50	99.85
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		6.20	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2		47.05	100.00
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O		0.60	100.00
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		120.98	99.43
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		170.50	99.40

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		61.27	100.00
125	159 Acetylcugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		34.90	100.00
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		80.28	100.00
137	175 Benzyl Benzoate	120-51-4	C14H12O2		0.39	100.00
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7		22.24	100.00

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Raison Ice Coffee	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.903	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		3.91	66.63
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2		7.23	100.00
5	8	Isopentyl Alcohol	123-51-3	C5H12O		1.26	100.00
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		0.91	100.00
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3		23.27	91.93
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		0.29	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.80	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		0.57	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O		2.11	100.00
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O		0.56	100.00
21	25	Furfuryl alcohol	98-00-0	C5H6O2		7.42	81.58
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.97	80.23
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		19.08	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O		15.47	85.82
27	34	β-Myrcene	123-35-3	C10H16		6.57	100.00
28	35	β-Pinene	127-91-3	C10H16		60.04	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		22.96	90.72
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2		0.19	100.00
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O		13.38	100.00
37	46 Limonene	138-86-3	C10H16		589.33	100.00
38	47 p-Cymene	99-87-6	C10H14		31.68	100.00
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND		NA
40	49 Eucalyptol	470-82-6	C10H18O		8.03	100.00
41	50 γ -Terpinene	99-85-4	C10H16		111.24	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND		NA
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND		NA
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND		NA
45	54 Corylone	765-70-8	C6H8O2		14.98	80.25
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND		NA
47	57 Benzyl Alcohol	100-51-6	C7H8O		908.07	87.44
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND		NA
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND		NA
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND		NA
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND		NA
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND		NA
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND		NA
54	67 Acetophenone	98-86-2	C8H8O		0.33	100.00
55	68 Linalool	78-70-6	C10H18O		2.36	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.25	75.96
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND		NA
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2		0.29	100.00
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND		NA
60	75 Fenchol	1632-73-1	C10H18O		9.46	100.00
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND		NA
62	77 Maltol	118-71-8	C6H6O3	ND		NA
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.80	77.08
64	79 β -Citronellal	106-23-0	C10H18O	ND		NA
65	80 Isopulegol	89-79-2	C10H18O		11.58	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2		12.17	91.11
67	83 Ethyl octanoate	106-32-1	C10H20O2		1.19	100.00
68	85 p-Menthone	10458-14-7	C10H18O		2.77	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND		NA
70	87 Neomenthol	2216-52-6	C10H20O		4.94	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND		NA
72	89 4-Terpineol	20126-76-5	C10H18O		21.64	100.00
73	90 Menthol	15356-70-4	C10H20O		4976.35	99.81
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND		NA
75	96 α -Terpineol	10482-56-1	C10H18O		119.13	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND		NA
77	98 Methyl salicylate	119-36-8	C8H8O3	ND		NA
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND		NA

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3		77.36	97.90
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		2.18	91.25
82	104 trans-Geraniol	106-24-1	C10H18O		0.79	100.00
83	105 Benzyl Propionate	122-63-4	C10H12O2		0.48	100.00
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		0.99	100.00
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		0.64	100.00
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		8.71	93.42
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		1.62	100.00
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		124.89	95.03
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4		104.19	94.05
98	122 Benzyl Butyrate	103-37-7	C11H14O2		0.44	100.00
99	124 Triacetin	102-76-1	C9H14O6		9933.02	99.77
100	125 Geraniol Acetate	105-87-3	C12H20O2		1.88	100.00
101	127 Ethyl decanoate	110-38-3	C12H24O2		0.83	100.00
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		0.27	100.00
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		4.66	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2		1.24	71.92
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.44	100.00
117	149 Vanillin	121-33-5	C8H8O3		143.98	97.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2		136.21	93.91
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		394.07	98.97

122	156 Coumarin	91-64-5	C9H6O2	ND		NA
123	157 Myristicin	607-91-0	C11H12O3	ND		NA
124	158 γ -Decalactone	706-14-9	C10H18O2		150.31	98.05
125	159 Acetylcugenol	93-28-7	C12H14O3	ND		NA
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND		NA
127	163 Isosafroeuugenol	94-86-0	C11H14O2	ND		NA
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND		NA
129	165 δ -Decalactone	705-86-2	C10H18O2	ND		NA
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND		NA
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND		NA
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND		NA
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND		NA
134	171 Benzyl ether	103-50-4	C14H14O		0.48	100.00
135	172 Benzophenone	119-61-9	C13H10O	ND		NA
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND		NA
137	175 Benzyl Benzoate	120-51-4	C14H12O2		2951.11	99.93
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2		0.80	100.00
139	178 Caffeine	58-08-2	C8H10N4O2		64.18	97.67
140	179 Benzyl cinnamate	103-41-3	C16H14O2		8.48	100.00
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND		NA
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND		NA

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Zouk	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.961	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		3.28	57.82
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.73	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.92	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2	ND		NA
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		1.43	77.25
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ -Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2		21.72	67.96
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		4.15	74.53
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.27	100.00
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.39	71.15
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2		0.38	100.00
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.43	71.53
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		0.42	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		25.21	62.38
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2		29.19	86.34

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.65	100.00
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2	ND	NA	
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		3.71	80.26
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		12.36	77.96
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		8740.33	98.91
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		101.64	69.19
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		189.32	9.66
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		683.88	14.13

122	156 Coumarin	91-64-5	C9H6O2		45.77	37.77
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		4.96	45.90
125	159 Acetylcugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2		6.39	0.00
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2		7.75	30.24
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4		2.11	55.67
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Canyon Vanilla	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.923	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		2.74	66.28
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.69	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.95	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2	ND		NA
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		1.16	76.75
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ -Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2		24.35	74.99
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		4.51	76.92
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.61	74.75
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.48	73.60
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2		0.40	100.00
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.36	71.65
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		0.42	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		27.82	63.97
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2		28.88	88.92

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.52	100.00
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2	ND	NA	
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		3.88	83.11
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		12.66	82.64
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		8965.99	98.81
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		105.15	72.39
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		140.60	12.75
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		577.31	15.40

122	156 Coumarin	91-64-5	C9H6O2		41.08	40.12
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		5.24	44.77
125	159 Acetylcugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2		4.16	0.00
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2		6.36	25.47
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4		0.91	100.00
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Camel Filters	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.906	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.36	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2	ND		NA
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.25	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		0.52	62.04
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		0.97	59.08
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O	ND	NA	
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.48	51.83
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.02	67.86
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		0.46	100.00
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA
84	106 Pulegone	89-82-7	C10H16O	ND	NA
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA
87	109 Menthyl Acetate	16409-45-3	C12H22O2	ND	NA
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA
89	111 Citral	5392-40-5	C10H16O	ND	NA
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA
91	113 Piperitone	89-81-6	C10H16O	ND	NA
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA
94	117 Thymol	89-83-8	C10H14O	ND	NA
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA
99	124 Triacetin	102-76-1	C9H14O6		5798.35 99.98
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA
102	129 Eugenol	97-53-0	C10H12O2	ND	NA
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA
104	132 Piperonal	120-57-0	C8H6O3	ND	NA
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA
113	143 α -Ionone	127-41-3	C13H20O	ND	NA
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA
117	149 Vanillin	121-33-5	C8H8O3	ND	NA
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2		4.14	100.00
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		4.75	100.00
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

Fruit				Cigarette	Camel Activate Double Fresh Berry	% in Filter	
Mint related				Replicate #		2	
#	Flavor List #	Compound Name	CAS Number	Sample Mass (g/cig) Formula		0.901	
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND	NA	
2	3	Hydroxyacetone	116-09-6	C3H6O2		3.50	62.50
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND	NA	
4	6	Acetoin	513-86-0	C4H8O2	ND	NA	
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND	NA	
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND	NA	
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND	NA	
8	11	1-Pentanol	71-41-0	C5H12O	ND	NA	
9	13	Ethyl butanoate	105-54-4	C6H12O2		398.47	100.00
10	14	Hexanal	66-25-1	C6H12O	ND	NA	
11	15	Butyl Acetate	123-86-4	C6H12O2	ND	NA	
12	16	Ethyl lactate	97-64-3	C5H10O3	ND	NA	
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		86.39	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		24.63	100.00
15	19	Furfural	98-01-1	C5H4O2		0.42	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND	NA	
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND	NA	
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND	NA	
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND	NA	
20	24	1-Hexanol	111-27-3	C6H14O	ND	NA	
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.07	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND	NA	
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.81	79.15
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		8.67	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND	NA	
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND	NA	
27	34	β-Myrcene	123-35-3	C10H16	ND	NA	
28	35	β-Pinene	127-91-3	C10H16		8.72	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND	NA	
30	37	Ethyl hexanoate	123-66-0	C8H16O2		89.47	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		1.18	77.20
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND	NA	
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND	NA	
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND	NA	
35	43	Hexyl acetate	142-92-7	C8H16O2	ND	NA	
36	45	1,4-Cineol	470-67-7	C10H18O	ND	NA	

37	46 Limonene	138-86-3	C10H16		16.22	100.00
38	47 p-Cymene	99-87-6	C10H14		2.40	100.00
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		29.98	100.00
41	50 γ-Terpinene	99-85-4	C10H16		1.40	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		3.59	76.55
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.16	100.00
52	64 Amyl Isovalerate	25415-62-7	C10H20O2		0.14	100.00
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.55	100.00
55	68 Linalool	78-70-6	C10H18O		5.74	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.63	73.22
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		2.24	81.96
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		24.51	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		853.80	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		73.51	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		189.06	100.00
73	90 Menthol	15356-70-4	C10H20O		5974.00	99.99
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O		0.27	100.00
75	96 α-Terpineol	10482-56-1	C10H18O		8.42	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linalyl acetate	115-95-7	C12H20O2		9.04	100.00
80	101 Ethyl Maltol	4940-11-8	C7H8O3		7.90	100.00

81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		5.37	100.00
83	105 Benzyl Propionate	122-63-4	C10H12O2		33.49	100.00
84	106 Pulegone	89-82-7	C10H16O		18.27	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		522.68	100.00
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		11.64	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		32.58	100.00
94	117 Thymol	89-83-8	C10H14O		0.15	100.00
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2		0.50	100.00
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		8803.21	99.84
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		0.28	100.00
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		11.72	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.98	100.00
117	149 Vanillin	121-33-5	C8H8O3		3.33	100.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2		0.60	100.00
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		19.69	100.00
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3		0.65	100.00
124	158 γ -Decalactone	706-14-9	C10H18O2		24.13	100.00

125	159 Acetylugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroegenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		18.96	100.00
131	168 Raspberry ketone	5471-51-2	C10H12O2		23.41	100.00
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		0.81	0.00
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary
 Concentrations are in µg/cig of sample

ND: not detected
 NA: not available

				Cigarette	Camel Caster	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.891	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.74	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2	ND		NA
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2	ND		NA
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		14.35	98.24
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		55.34	95.90
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O	ND	NA	
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.76	71.13
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		0.65	100.00
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		2.27	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O	ND	NA	
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2	ND	NA	
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		5240.00	99.97
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		0.92	0.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		0.63	0.00

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2		2.44	100.00
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		3.01	100.00
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7		0.79	0.00

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Kent iSwitch	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.904	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2	ND		NA
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2	ND		NA
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2	ND		NA
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		0.22	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16		0.26	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		0.24	100.00
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16		0.64	100.00
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ -Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4		2.14	100.00
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		0.65	100.00
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O	ND	NA	
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.51	56.33
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		0.69	63.21
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		8.65	100.00
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		9.73	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		7.78	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		5247.73	100.00
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O		1.03	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		1.05	100.00
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		0.34	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		7839.10	99.98
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		0.79	100.00
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Kent Nanotek 2.0	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.486	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2	ND		NA
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2	ND		NA
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2	ND		NA
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		0.65	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16		0.87	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		0.22	100.00
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4		2.13	100.00
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		0.27	100.00
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O	ND	NA	
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.35	49.78
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		0.31	100.00
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		0.26	100.00
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		0.37	100.00
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		8.39	93.56
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		0.63	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		0.33	100.00
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		3804.84	99.97
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND	NA
123	157 Myristicin	607-91-0	C11H12O3	ND	NA
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA
135	172 Benzophenone	119-61-9	C13H10O	ND	NA
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Chapman No.3 Cherry	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.593	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.77	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.06	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.14	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		79.34	93.93
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		20.20	84.40
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		1.27	75.92
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.22	100.00
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.90	71.37
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		0.91	71.56
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		3.58	94.08
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2		0.48	80.36
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		6.42	72.90
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2	ND	NA	
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		45.81	95.95
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		4.81	88.75
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		0.55	100.00
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		5832.11	99.79
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2		0.86	58.68
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		13.70	78.93
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O		3.87	72.09
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		1.27	0.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		8.10	64.03
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2	ND	NA
123	157 Myristicin	607-91-0	C11H12O3	ND	NA
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA
127	163 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA
131	168 Raspberry ketone	5471-51-2	C10H12O2		33.60 2.36
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA
135	172 Benzophenone	119-61-9	C13H10O	ND	NA
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Chapman No.3 Coffee	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.587	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.37	100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2		28.24	83.86
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		0.34	100.00
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2		1.20	100.00
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.60	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.93	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.14	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		5.77	90.02
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2		1.33	82.74
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2		5.05	100.00
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		35.23	80.19
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.13	100.00
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.77	67.25
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2		0.78	85.26
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		2.54	76.42
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		1.18	86.29
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O	ND	NA	
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		3.12	92.63
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2		1.97	73.11
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2	ND	NA	
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		0.72	100.00
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		0.50	72.35
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		2.95	82.06
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		6315.05	99.70
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		109.74	75.01
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		1.78	68.90
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2		58.66	69.65
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		3.75	0.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		1.34	0.00

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		5.38	47.37
125	159 Acetylcugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroegenol	94-86-0	C11H14O2		1.49	25.61
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4		0.76	100.00
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		3.62	20.50
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Black Devil Café	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.955	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		8.78	57.99
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2		2.73	100.00
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		1.22	74.82
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.89	71.53
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.25	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		1.82	78.89
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.52	100.00
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2		0.18	100.00
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ -Pentalactone	108-29-2	C5H8O2		50.56	87.46
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ -Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2		17.14	76.90
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		10.26	76.41
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.24	100.00
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.71	73.04
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2		0.36	100.00
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3		2.56	48.86
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.09	78.81
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		0.18	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		29.11	66.59
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2	ND	NA	
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		0.28	100.00
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		9.79	85.48
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		1.11	100.00
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		8711.64	98.74
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		9.23	73.35
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		13.37	13.66
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		283.81	10.82

122	156 Coumarin	91-64-5	C9H6O2	ND		NA
123	157 Myristicin	607-91-0	C11H12O3	ND		NA
124	158 γ -Decalactone	706-14-9	C10H18O2	ND		NA
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND		NA
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND		NA
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND		NA
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND		NA
129	165 δ -Decalactone	705-86-2	C10H18O2	ND		NA
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND		NA
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND		NA
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2		474.80	25.09
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND		NA
134	171 Benzyl ether	103-50-4	C14H14O	ND		NA
135	172 Benzophenone	119-61-9	C13H10O	ND		NA
136	174 δ -Dodecalactone	713-95-1	C12H22O2		1.27	0.00
137	175 Benzyl Benzoate	120-51-4	C14H12O2		46.63	14.95
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND		NA
139	178 Caffeine	58-08-2	C8H10N4O2	ND		NA
140	179 Benzyl cinnamate	103-41-3	C16H14O2		15.21	0.00
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND		NA
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND		NA

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Captain Black Cherise	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		1.122	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O		14.48	58.34
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O		12.98	56.02
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2	ND		NA
16	20	Isoamyl Acetate	123-92-2	C7H14O2		2.51	57.78
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2	ND		NA
22	26	Amyl Acetate	628-63-7	C7H14O2		1.02	100.00
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		1.45	61.83
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		322.62	76.66
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		2.64	58.03
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ -Pentalactone	108-29-2	C5H8O2		0.76	100.00
40	49 Eucalyptol	470-82-6	C10H18O		1.51	39.19
41	50 γ -Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		1034.05	70.63
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		1.16	72.16
55	68 Linalool	78-70-6	C10H18O		2.85	56.41
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.56	50.49
57	70 p-Tolualdehyde	104-87-0	C8H8O		22.73	73.46
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2		0.24	100.00
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3		2.73	34.26
63	78 Phenethyl alcohol	60-12-8	C8H10O		2.21	66.59
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		22.85	81.05
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		6.71	56.08
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		2.14	46.13
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		21.27	45.42
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2		9.39	50.46
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		5.59	48.07
83	105 Benzyl Propionate	122-63-4	C10H12O2		0.35	100.00
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		2.66	41.19
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		716.10	81.76
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		0.38	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2		2.21	62.44
99	124 Triacetin	102-76-1	C9H14O6		5826.90	99.96
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		47.45	76.32
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		0.90	53.83
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O		8.67	40.50
114	144 Ethyl anthranilate	87-25-2	C9H11NO2		13.29	0.00
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		540.40	10.33
118	150 Ethyl Cinnamate	103-36-6	C11H12O2		1.56	79.34
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		2.27	39.06
121	155 Ethyl Vanillin	121-32-4	C9H10O3		287.88	11.00

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		9.37	44.97
125	159 Acetylcugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		59.94	26.86
131	168 Raspberry ketone	5471-51-2	C10H12O2		1.80	0.00
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		3.12	23.21
137	175 Benzyl Benzoate	120-51-4	C14H12O2		1.12	46.62
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Captain Black Grape	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		1.154	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.48	0.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2		1.60	70.31
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		0.86	66.76
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		3.83	66.46
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2	ND		NA
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O		0.85	100.00
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2	ND		NA
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		1.95	60.93
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		102.90	76.76
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		2.70	55.92
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		2.07	40.30
41	50 γ -Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		6.33	62.38
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		4.16	75.97
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.72	60.24
57	70 p-Tolualdehyde	104-87-0	C8H8O		0.29	100.00
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3		12.58	51.15
63	78 Phenethyl alcohol	60-12-8	C8H10O		5.37	67.17
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		0.32	100.00
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		6.62	58.27
69	86 Ethyl Benzoate	93-89-0	C9H10O2		0.54	55.91
70	87 Neomenthol	2216-52-6	C10H20O		2.51	50.60
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		19.67	45.76
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3		0.55	56.71
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3		66.50	48.63
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.22	100.00
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2		1.04	35.85
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		2.49	36.83
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		189.45	83.00
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		6266.90	99.94
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2		1623.93	72.13
104	132 Piperonal	120-57-0	C8H6O3		26.48	78.59
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2		0.57	100.00
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2		8.93	15.22
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		71.65	21.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		321.97	18.38

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2		4.53	0.00
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		2.22	31.31
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Captain Black Dark Crema	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		1.121	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2	ND		NA
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2	ND		NA
16	20	Isoamyl Acetate	123-92-2	C7H14O2	ND		NA
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2	ND		NA
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		2.34	70.46
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		1.87	75.45
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		2.68	62.22
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2		0.15	100.00
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16	ND	NA	
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		1.05	47.27
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		0.80	59.60
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2	ND	NA	
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.56	67.01
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.27	100.00
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3		2.13	50.31
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.69	75.47
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		5.14	65.15
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		1.74	52.33
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		14.72	53.77
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		0.30	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		1.45	33.42
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		0.30	100.00
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		0.18	100.00
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		5448.02	99.95
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2	ND	NA	
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		20.96	24.17
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		82.26	19.79

122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyლეugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		2.11	32.50
137	175 Benzyl Benzoate	120-51-4	C14H12O2	ND	NA	
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	DIARUM BLACK	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.955	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		9.05	42.99
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND		NA
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND		NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		2.50	70.27
16	20	Isoamyl Acetate	123-92-2	C7H14O2		0.84	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.68	64.48
22	26	Amyl Acetate	628-63-7	C7H14O2		0.40	100.00
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2	ND		NA
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16	ND		NA
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND		NA
31	38	Benzaldehyde	100-52-7	C7H6O		2.55	70.92
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.58	100.00
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA

36	45 1,4-Cineol	470-67-7	C10H18O	ND	NA	
37	46 Limonene	138-86-3	C10H16		0.86	39.46
38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ -Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2	ND	NA	
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		6.89	55.81
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		2.29	44.88
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.34	100.00
55	68 Linalool	78-70-6	C10H18O		1.30	57.13
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.07	53.30
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		1.34	49.95
64	79 β -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		1.59	71.98
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O	ND	NA	
69	86 Ethyl Benzoate	93-89-0	C9H10O2		0.57	61.08
70	87 Neomenthol	2216-52-6	C10H20O	ND	NA	
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		79.39	39.07
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α -Terpineol	10482-56-1	C10H18O	ND	NA	
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3		6.72	66.26
78	99 γ -Heptalactone	105-21-5	C7H12O2	ND	NA	

79	100 Linalyl acetate	115-95-7	C12H20O2	ND	NA	
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.25	100.00
82	104 trans-Geraniol	106-24-1	C10H18O	ND	NA	
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O	ND	NA	
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		2.92	31.25
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		0.30	100.00
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O	ND	NA	
92	114 p-Anisaldehyde	123-11-5	C8H8O2		0.80	58.27
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		11933.10	99.31
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2		16437.94	41.40
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3	ND	NA	
105	133 Eugenol methyl ether	93-15-2	C11H14O2		1.29	33.74
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		714.68	14.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		80.22	14.08
117	149 Vanillin	121-33-5	C8H8O3		20.59	82.87
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3	ND	NA	

122	156 Coumarin	91-64-5	C9H6O2		10.40	22.83
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyლეugenol	93-28-7	C12H14O3		123.89	39.89
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroeuēgenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2		1.30	0.00
130	167 γ -Undecalactone	104-67-6	C11H20O2	ND	NA	
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		2.86	0.00
137	175 Benzyl Benzoate	120-51-4	C14H12O2		5.53	9.98
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2	ND	NA	
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

Fruit				Cigarette	Luckies Click 4 Mix - Sampler/Purple	% in Filter
Mint related				Replicate #		2
				Sample Mass (g/cig)		0.919
#	Flavor List #	Compound Name	CAS Number	Formula		
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND	NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		2.26 100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND	NA
4	6	Acetoin	513-86-0	C4H8O2	ND	NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND	NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND	NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND	NA
8	11	1-Pentanol	71-41-0	C5H12O	ND	NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		0.38 100.00
10	14	Hexanal	66-25-1	C6H12O	ND	NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND	NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND	NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		36.98 100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		18.38 100.00
15	19	Furfural	98-01-1	C5H4O2		0.53 100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		93.89 100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		21.35 100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND	NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND	NA
20	24	1-Hexanol	111-27-3	C6H14O	ND	NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.69 100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND	NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.68 100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND	NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND	NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND	NA
27	34	β-Myrcene	123-35-3	C10H16	ND	NA
28	35	β-Pinene	127-91-3	C10H16	ND	NA
29	36	Butyl butyrate	109-21-7	C8H16O2		31.00 100.00
30	37	Ethyl hexanoate	123-66-0	C8H16O2		36.63 100.00
31	38	Benzaldehyde	100-52-7	C7H6O		1.09 100.00
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND	NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND	NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND	NA
35	43	Hexyl acetate	142-92-7	C8H16O2		19.20 100.00
36	45	1,4-Cineol	470-67-7	C10H18O	ND	NA
37	46	Limonene	138-86-3	C10H16	ND	NA

38	47 p-Cymene	99-87-6	C10H14	ND	NA	
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 γ-Terpinene	99-85-4	C10H16	ND	NA	
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2		13.77	100.00
45	54 Corylone	765-70-8	C6H8O2		2.26	100.00
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		2.80	81.41
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2		27.19	100.00
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND	NA	
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		1.34	74.14
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.23	100.00
55	68 Linalool	78-70-6	C10H18O		8.50	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.77	84.27
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND	NA	
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		10.43	89.01
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		14.41	84.32
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.19	100.00
68	85 p-Menthone	10458-14-7	C10H18O		5.61	86.37
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		9.33	79.52
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		7834.72	79.50
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O		0.79	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linaly acetate	115-95-7	C12H20O2		15.50	100.00
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		8.71	92.42

83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		0.60	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O	ND	NA	
87	109 Menthyl Acetate	16409-45-3	C12H22O2		4.52	74.61
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		0.54	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2		0.94	100.00
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Geranetin	102-76-1	C9H14O6		11562.91	99.81
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2		2.74	74.67
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		3.61	88.44
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O		20.07	100.00
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O		1.25	77.80
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		8.81	95.27
121	155 Ethyl Vanillin	121-32-4	C9H10O3		0.66	0.00
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		20.82	100.00
125	159 Acetyleugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroegenol	94-86-0	C11H14O2	ND	NA	

128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		16.74	95.23
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		4.70	25.27
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2		0.70	0.00
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary
 Concentrations are in µg/cig of sample

ND: not detected
 NA: not available

Fruit				Cigarette	Luckies Click 4 Mix - Sampler/Red	% in Filter	
Mint related				Replicate #		2	
#	Flavor List #	Compound Name	CAS Number	Sample Mass (g/cig)		0.919	
				Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		2.28	100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND		NA
4	6	Acetoin	513-86-0	C4H8O2	ND		NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND		NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND		NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND		NA
8	11	1-Pentanol	71-41-0	C5H12O	ND		NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		9.46	100.00
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND		NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		4.10	100.00
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		1.81	100.00
15	19	Furfural	98-01-1	C5H4O2		0.59	100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		175.68	100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		19.22	100.00
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND		NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O	ND		NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.83	100.00
22	26	Amyl Acetate	628-63-7	C7H14O2		0.48	100.00
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.68	100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		8.13	100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND		NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND		NA
27	34	β-Myrcene	123-35-3	C10H16	ND		NA
28	35	β-Pinene	127-91-3	C10H16		8.87	100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		5.59	100.00
31	38	Benzaldehyde	100-52-7	C7H6O		1.17	100.00
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O	ND		NA
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND		NA
36	45	1,4-Cineol	470-67-7	C10H18O	ND		NA

37	46 Limonene	138-86-3	C10H16		14.67	100.00
38	47 p-Cymene	99-87-6	C10H14		2.50	100.00
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND		NA
40	49 Eucalyptol	470-82-6	C10H18O		77.24	100.00
41	50 γ-Terpinene	99-85-4	C10H16		0.30	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND		NA
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND		NA
44	53 Isoamyl Butyrate	106-27-4	C9H18O2		45.58	100.00
45	54 Corylone	765-70-8	C6H8O2		2.38	100.00
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND		NA
47	57 Benzyl Alcohol	100-51-6	C7H8O		3.10	82.38
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND		NA
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND		NA
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND		NA
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		1.38	72.84
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND		NA
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND		NA
54	67 Acetophenone	98-86-2	C8H8O		0.26	100.00
55	68 Linalool	78-70-6	C10H18O		0.74	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.99	77.70
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND		NA
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND		NA
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND		NA
60	75 Fenchol	1632-73-1	C10H18O	ND		NA
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND		NA
62	77 Maltol	118-71-8	C6H6O3	ND		NA
63	78 Phenethyl alcohol	60-12-8	C8H10O		11.08	87.34
64	79 β-Citronellal	106-23-0	C10H18O	ND		NA
65	80 Isopulegol	89-79-2	C10H18O		19.94	84.90
66	82 Benzyl acetate	140-11-4	C9H10O2	ND		NA
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND		NA
68	85 p-Menthone	10458-14-7	C10H18O		119.36	99.28
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND		NA
70	87 Neomenthol	2216-52-6	C10H20O		25.70	91.48
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND		NA
72	89 4-Terpineol	20126-76-5	C10H18O		34.23	100.00
73	90 Menthol	15356-70-4	C10H20O		11897.69	85.69
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND		NA
75	96 α-Terpineol	10482-56-1	C10H18O		1.88	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND		NA
77	98 Methyl salicylate	119-36-8	C8H8O3	ND		NA
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND		NA
79	100 Linalyl acetate	115-95-7	C12H20O2	ND		NA
80	101 Ethyl Maltol	4940-11-8	C7H8O3		10.73	100.00

81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		2.95	76.79
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		3.65	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		0.69	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		30.51	95.74
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		1.40	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2		52.23	100.00
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Triacetin	102-76-1	C9H14O6		13418.18	99.82
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2		2.85	73.62
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		115.08	99.70
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		4.62	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2		122.50	100.00
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 α -Ionone	127-41-3	C13H20O		1.49	77.06
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		11.13	100.00
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		1.37	70.07
121	155 Ethyl Vanillin	121-32-4	C9H10O3		25.25	97.15
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		113.23	100.00

125	159 Acetylugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroegenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		66.00	98.45
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		76.02	100.00
137	175 Benzyl Benzoate	120-51-4	C14H12O2		5.78	31.29
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2		0.75	0.00
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

Fruit				Cigarette	Luckies Click 4 Mix - Sampler/Yellow	% in Filter
Mint related				Replicate #		2
				Sample Mass (g/cig)		0.921
#	Flavor List #	Compound Name	CAS Number	Formula		
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND	NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.27 100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND	NA
4	6	Acetoin	513-86-0	C4H8O2	ND	NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND	NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND	NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND	NA
8	11	1-Pentanol	71-41-0	C5H12O	ND	NA
9	13	Ethyl butanoate	105-54-4	C6H12O2		0.20 100.00
10	14	Hexanal	66-25-1	C6H12O	ND	NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND	NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND	NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND	NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND	NA
15	19	Furfural	98-01-1	C5H4O2		0.30 100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		0.52 100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND	NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND	NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND	NA
20	24	1-Hexanol	111-27-3	C6H14O	ND	NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.97 100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND	NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.34 100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		14.67 100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND	NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND	NA
27	34	β-Myrcene	123-35-3	C10H16		10.75 100.00
28	35	β-Pinene	127-91-3	C10H16		9.62 100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND	NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND	NA
31	38	Benzaldehyde	100-52-7	C7H6O		0.60 100.00
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.41 100.00
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND	NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND	NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND	NA
36	45	1,4-Cineol	470-67-7	C10H18O	ND	NA
37	46	Limonene	138-86-3	C10H16		89.49 100.00

38	47 p-Cymene	99-87-6	C10H14		11.84	100.00
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		37.45	100.00
41	50 γ-Terpinene	99-85-4	C10H16		1.15	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND	NA	
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND	NA	
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND	NA	
45	54 Corylone	765-70-8	C6H8O2		1.22	100.00
46	55 Ally hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		1.52	82.86
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND	NA	
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND	NA	
50	61 cis-Linalool oxide	5989-33-3	C10H18O2		0.98	100.00
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.70	72.72
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND	NA	
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2		1.23	100.00
54	67 Acetophenone	98-86-2	C8H8O	ND	NA	
55	68 Linalool	78-70-6	C10H18O		100.02	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.11	81.13
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND	NA	
59	74 cis-Limonene oxide	13837-75-7	C10H16O		1.21	100.00
60	75 Fenchol	1632-73-1	C10H18O	ND	NA	
61	76 trans-Limonene oxide	6909-30-4	C10H16O		0.57	100.00
62	77 Maltol	118-71-8	C6H6O3	ND	NA	
63	78 Phenethyl alcohol	60-12-8	C8H10O		5.80	87.99
64	79 β-Citronellal	106-23-0	C10H18O		12.08	100.00
65	80 Isopulegol	89-79-2	C10H18O		9.88	84.83
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		6.83	93.62
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		5.78	81.31
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O	ND	NA	
73	90 Menthol	15356-70-4	C10H20O		4321.70	80.79
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 α-Terpineol	10482-56-1	C10H18O		3.02	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linalyl acetate	115-95-7	C12H20O2		6.42	100.00
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		5.47	94.27

83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		0.50	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		283.38	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		3.13	80.53
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O		25.62	100.00
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		1.08	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2		0.45	100.00
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 γ -Octalactone	104-50-7	C8H14O2		0.10	100.00
96	120 Nerol acetate	141-12-8	C12H20O2		0.37	100.00
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Geranin	102-76-1	C9H14O6		5813.40	99.76
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2		1.57	77.83
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		1.59	87.94
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		2.39	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2		14.05	100.00
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24		0.84	100.00
113	143 α -Ionone	127-41-3	C13H20O		0.68	76.89
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.28	100.00
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		0.72	70.97
121	155 Ethyl Vanillin	121-32-4	C9H10O3		0.33	0.00
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2		13.13	100.00
125	159 Acetyleugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroegenol	94-86-0	C11H14O2	ND	NA	

128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		1.24	53.54
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2		9.56	100.00
137	175 Benzyl Benzoate	120-51-4	C14H12O2		2.56	30.51
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2		0.44	0.00
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	

Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

Fruit				Cigarette	Luckies Click 4 Mix - Sampler/Green	% in Filter
Mint related				Replicate #		2
				Sample Mass (g/cig)		0.928
#	Flavor List #	Compound Name	CAS Number	Formula		
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND	NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.97 100.00
3	5	Ethyl Propanoate	105-37-3	C5H10O2	ND	NA
4	6	Acetoin	513-86-0	C4H8O2	ND	NA
5	8	Isopentyl Alcohol	123-51-3	C5H12O	ND	NA
6	9	Isobutyl Acetate	110-19-0	C6H12O2	ND	NA
7	10	Methyl 2-methylbutyrate	868-57-5	C6H12O2	ND	NA
8	11	1-Pentanol	71-41-0	C5H12O	ND	NA
9	13	Ethyl butanoate	105-54-4	C6H12O2	ND	NA
10	14	Hexanal	66-25-1	C6H12O	ND	NA
11	15	Butyl Acetate	123-86-4	C6H12O2	ND	NA
12	16	Ethyl lactate	97-64-3	C5H10O3	ND	NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2	ND	NA
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND	NA
15	19	Furfural	98-01-1	C5H4O2		0.56 100.00
16	20	Isoamyl Acetate	123-92-2	C7H14O2		0.72 100.00
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND	NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O	ND	NA
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND	NA
20	24	1-Hexanol	111-27-3	C6H14O	ND	NA
21	25	Furfuryl alcohol	98-00-0	C5H6O2		1.97 100.00
22	26	Amyl Acetate	628-63-7	C7H14O2	ND	NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.62 100.00
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		37.00 100.00
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2	ND	NA
26	33	2-Methoxy-3-methylpyrazine	2847-30-5	C6H8N2O	ND	NA
27	34	β-Myrcene	123-35-3	C10H16	ND	NA
28	35	β-Pinene	127-91-3	C10H16		37.67 100.00
29	36	Butyl butyrate	109-21-7	C8H16O2	ND	NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2	ND	NA
31	38	Benzaldehyde	100-52-7	C7H6O		1.08 100.00
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.50 100.00
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND	NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND	NA
35	43	Hexyl acetate	142-92-7	C8H16O2	ND	NA
36	45	1,4-Cineol	470-67-7	C10H18O	ND	NA
37	46	Limonene	138-86-3	C10H16		147.76 100.00

38	47 p-Cymene	99-87-6	C10H14		9.22	100.00
39	48 γ-Pentalactone	108-29-2	C5H8O2	ND		NA
40	49 Eucalyptol	470-82-6	C10H18O		152.93	100.00
41	50 γ-Terpinene	99-85-4	C10H16		2.44	100.00
42	51 Dimethyl butanedioate	106-65-0	C6H10O4	ND		NA
43	52 Acetylpyrazine	22047-25-2	C6H6N2O	ND		NA
44	53 Isoamyl Butyrate	106-27-4	C9H18O2	ND		NA
45	54 Corylone	765-70-8	C6H8O2		2.33	100.00
46	55 Ally hexanoate	123-68-2	C9H16O2	ND		NA
47	57 Benzyl Alcohol	100-51-6	C7H8O		3.11	84.37
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2	ND		NA
49	60 Ethyl Heptanoate	106-30-9	C9H18O2	ND		NA
50	61 cis-Linalool oxide	5989-33-3	C10H18O2	ND		NA
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		1.34	71.56
52	64 Amyl Isovalerate	25415-62-7	C10H20O2	ND		NA
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND		NA
54	67 Acetophenone	98-86-2	C8H8O		0.25	100.00
55	68 Linalool	78-70-6	C10H18O		2.79	100.00
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.05	79.64
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND		NA
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2	ND		NA
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND		NA
60	75 Fenchol	1632-73-1	C10H18O	ND		NA
61	76 trans-Limonene oxide	6909-30-4	C10H16O	ND		NA
62	77 Maltol	118-71-8	C6H6O3	ND		NA
63	78 Phenethyl alcohol	60-12-8	C8H10O		11.50	87.32
64	79 β-Citronellal	106-23-0	C10H18O	ND		NA
65	80 Isopulegol	89-79-2	C10H18O		27.19	89.92
66	82 Benzyl acetate	140-11-4	C9H10O2	ND		NA
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND		NA
68	85 p-Menthone	10458-14-7	C10H18O		912.00	99.90
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND		NA
70	87 Neomenthol	2216-52-6	C10H20O		145.69	98.43
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND		NA
72	89 4-Terpineol	20126-76-5	C10H18O		139.10	100.00
73	90 Menthol	15356-70-4	C10H20O		13062.72	86.76
74	94 Estragole (4-allyanisole)	140-67-0	C10H12O	ND		NA
75	96 α-Terpineol	10482-56-1	C10H18O		3.63	100.00
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND		NA
77	98 Methyl salicylate	119-36-8	C8H8O3	ND		NA
78	99 γ-Heptalactone	105-21-5	C7H12O2	ND		NA
79	100 Linalyl acetate	115-95-7	C12H20O2	ND		NA
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND		NA
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2	ND		NA
82	104 trans-Geraniol	106-24-1	C10H18O		2.78	76.28

83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		1.77	100.00
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		318.08	100.00
87	109 Menthyl Acetate	16409-45-3	C12H22O2		196.37	99.35
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2	ND	NA	
89	111 Citral	5392-40-5	C10H16O	ND	NA	
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		2.63	100.00
92	114 p-Anisaldehyde	123-11-5	C8H8O2		0.88	100.00
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O		0.14	100.00
95	118 γ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2	ND	NA	
97	121 Butyl butyrolactate	7492-70-8	C11H20O4	ND	NA	
98	122 Benzyl Butyrate	103-37-7	C11H14O2	ND	NA	
99	124 Geriacetin	102-76-1	C9H14O6		12816.48	99.78
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2		2.97	76.61
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		3.38	87.68
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 α -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 β -Caryophyllene	87-44-5	C15H24		68.26	100.00
109	139 γ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 β -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24		1.31	100.00
113	143 α -Ionone	127-41-3	C13H20O		1.48	76.60
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 α -Caryophyllene (α -Humulene)	6753-98-6	C15H24		0.56	100.00
117	149 Vanillin	121-33-5	C8H8O3	ND	NA	
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- β -Ionone	79-77-6	C13H20O		1.31	70.79
121	155 Ethyl Vanillin	121-32-4	C9H10O3		0.56	0.00
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 γ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyleugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2	ND	NA	
127	163 Isosafroegenol	94-86-0	C11H14O2	ND	NA	

128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 δ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 γ -Undecalactone	104-67-6	C11H20O2		2.33	55.31
131	168 Raspberry ketone	5471-51-2	C10H12O2	ND	NA	
132	169 Coumarin, 6-methyl	92-48-8	C10H8O2	ND	NA	
133	170 Heliotropine propylene glycol acetal	61683-99-6	C11H12O4	ND	NA	
134	171 Benzyl ether	103-50-4	C14H14O	ND	NA	
135	172 Benzophenone	119-61-9	C13H10O	ND	NA	
136	174 δ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		5.55	29.96
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2		0.73	0.00
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO	ND	NA	
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	