

## Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	DJ Mix Green Apple	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.959	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		3.2	70.0
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		1.6	100.0
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		53.0	99.3
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		1.0	100.0
16	20	Isoamyl Acetate	123-92-2	C7H14O2		303.4	99.5
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		67.2	99.1
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		108.0	99.4
21	25	Furfuryl alcohol	98-00-0	C5H6O2		3.0	78.5
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		1.1	80.5
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		3.1	95.4
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		11.4	97.5
28	35	β-Pinene	127-91-3	C10H16		1.3	89.3
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		351.5	99.5
31	38	Benzaldehyde	100-52-7	C7H6O		2.0	89.4
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		449.1	99.5
36	45	1,4-Cineol	470-67-7	C10H18O	ND		NA
37	46	Limonene	138-86-3	C10H16		84.9	98.3
38	47	p-Cymene	99-87-6	C10H14		3.8	97.2

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		11.1	95.8
41	50 $\gamma$ -Terpinene	99-85-4	C10H16		1.6	100.0
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		67.5	99.4
45	54 Corylone	765-70-8	C6H8O2		1.2	100.0
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		4.1	79.7
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		0.4	100.0
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		0.3	100.0
55	68 Linalool	78-70-6	C10H18O		0.7	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		3.8	77.6
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		2.6	80.3
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		14.7	89.7
66	82 Benzyl acetate	140-11-4	C9H10O2		0.3	100.0
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.2	100.0
68	85 p-Menthone	10458-14-7	C10H18O		8.4	89.7
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		8.3	89.6
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		9723.0	89.9
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -Terpineol	10482-56-1	C10H18O		1.9	100.0
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3		0.2	100.0
78	99 $\gamma$ -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		0.3	100.0
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		569.4	99.9
87	109 Menthyl Acetate	16409-45-3	C12H22O2		9.1	76.1
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		1.4	100.0
92	114 p-Anisaldehyde	123-11-5	C8H8O2		2.9	87.7
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		3.5	100.0
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 $\gamma$ -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		9224.8	99.8
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		0.9	100.0
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		0.6	100.0
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24		7.8	100.0
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24		0.5	100.0
117	149 Vanillin	121-33-5	C8H8O3		4.6	59.2
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- $\beta$ -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		5.4	67.0
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 $\gamma$ -Decalactone	706-14-9	C10H18O2	ND	NA	
125	159 Acetyleugenol	93-28-7	C12H14O3	ND	NA	
126	161 Hexyl octanoate	1117-55-1	C14H28O2		1.6	100.0
127	163 Isosafroegenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2		0.5	100.0
129	165 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -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		0.5	50.1
136	174 $\delta$ -Dodecalactone	713-95-1	C12H22O2		1.5	51.7
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		0.6	58.0

## Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	DJ Mix Strawberry	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.930	
#	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		0.3	100.0
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		64.7	99.3
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		1.3	100.0
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		55.0	99.4
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		9.2	100.0
15	19	Furfural	98-01-1	C5H4O2		0.7	100.0
16	20	Isoamyl Acetate	123-92-2	C7H14O2		16.9	100.0
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		4.6	100.0
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O		9.8	100.0
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		1.4	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.2	100.0
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		10.7	100.0
31	38	Benzaldehyde	100-52-7	C7H6O		1.8	90.3
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.5	100.0
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2		8.8	100.0
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2	ND		NA
35	43	Hexyl acetate	142-92-7	C8H16O2		1.3	100.0
36	45	1,4-Cineol	470-67-7	C10H18O	ND		NA
37	46	Limonene	138-86-3	C10H16		0.5	58.0
38	47	p-Cymene	99-87-6	C10H14		0.1	100.0

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		0.5	100.0
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		1.7	81.5
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		0.2	100.0
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		0.3	100.0
55	68 Linalool	78-70-6	C10H18O		0.8	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.9	83.5
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		1.0	78.6
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		10.0	76.1
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		52.4	99.7
68	85 p-Menthone	10458-14-7	C10H18O		10.3	92.1
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		5.3	83.1
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		7019.1	81.8
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -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		13.7	100.0
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.2	100.0
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		0.5	100.0

85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		1.7	100.0
87	109 Menthyl Acetate	16409-45-3	C12H22O2		6.1	77.1
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		0.6	100.0
92	114 p-Anisaldehyde	123-11-5	C8H8O2		0.3	100.0
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 $\gamma$ -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		10533.0	99.3
100	125 Geraniol Acetate	105-87-3	C12H20O2	ND	NA	
101	127 Ethyl decanoate	110-38-3	C12H24O2		8.4	100.0
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		13.1	100.0
107	135 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -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)- $\beta$ -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 $\gamma$ -Decalactone	706-14-9	C10H18O2		79.3	100.0
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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -Undecalactone	104-67-6	C11H20O2		39.9	100.0

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		0.2	100.0
136	174 $\delta$ -Dodecalactone	713-95-1	C12H22O2		2.6	54.5
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		0.8	100.0

## Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	DJ Mix Blueberry	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.846	
#	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		105.1	100.0
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		40.5	100.0
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		41.2	100.0
15	19	Furfural	98-01-1	C5H4O2	ND		NA
16	20	Isoamyl Acetate	123-92-2	C7H14O2		33.6	100.0
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		7.9	100.0
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		0.1	100.0
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		62.7	100.0
31	38	Benzaldehyde	100-52-7	C7H6O		0.9	100.0
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.3	100.0
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		1.0	67.1
38	47	p-Cymene	99-87-6	C10H14		0.1	100.0

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		5.4	89.6
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		0.2	100.0
55	68 Linalool	78-70-6	C10H18O		4.3	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.7	100.0
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		4.1	100.0
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		17.6	89.0
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		4.3	88.4
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		8.1	88.9
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		9698.8	89.3
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linalyl acetate	115-95-7	C12H20O2		19.2	100.0
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzenecetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		24.6	100.0
83	105 Benzyl Propionate	122-63-4	C10H12O2		15.2	100.0
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		0.5	100.0
87	109 Menthyl Acetate	16409-45-3	C12H22O2		5.0	80.0
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		0.3	100.0
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		48.7	100.0
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 $\gamma$ -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		10321.1	99.6
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -Ionone	127-41-3	C13H20O		0.3	100.0
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		114.0	100.0
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- $\beta$ -Ionone	79-77-6	C13H20O		74.3	100.0
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 $\gamma$ -Decalactone	706-14-9	C10H18O2		37.4	100.0
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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -Undecalactone	104-67-6	C11H20O2		25.7	100.0

131	168 Raspberry ketone	5471-51-2	C10H12O2		187.3	100.0
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		0.5	100.0
136	174 $\delta$ -Dodecalactone	713-95-1	C12H22O2		2.6	70.0
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 Black Menthol	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.800	
#	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		0.4	100.0
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		0.7	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.6	71.9
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		0.6	100.0
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 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		1.2	66.9
46	55 Allyl hexanoate	123-68-2	C9H16O2	ND	NA	
47	57 Benzyl Alcohol	100-51-6	C7H8O		10.5	74.3
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		0.7	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.9	58.5
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		0.9	67.6
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		0.1	100.0
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		1.6	71.1
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		1.2	59.8
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		8615.9	64.8
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -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		0.4	100.0
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		1.0	57.7
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		16.6	84.5
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 $\gamma$ -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		9649.3	99.2
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -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)- $\beta$ -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 $\gamma$ -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 $\delta$ -Decalactone	705-86-2	C10H18O2		0.2	100.0
130	167 $\gamma$ -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 $\delta$ -Dodecalactone	713-95-1	C12H22O2		0.9	100.0
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	Bohem Cigar Slim -Fit Brown	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)	0.516		
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.6	100.0
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		1.2	100.0
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		0.7	100.0
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		0.4	100.0
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		1.1	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.3	100.0
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		25.0	100.0
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		79.8	100.0
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		1.3	89.6
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		17.3	100.0
37	46	Limonene	138-86-3	C10H16		749.0	100.0
38	47	p-Cymene	99-87-6	C10H14		58.7	100.0
39	48	γ-Pentalactone	108-29-2	C5H8O2	ND		NA

40	49 Eucalyptol	470-82-6	C10H18O		10.9	100.0
41	50 $\gamma$ -Terpinene	99-85-4	C10H16		126.4	100.0
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		2.2	84.7
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		0.2	100.0
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		0.3	100.0
55	68 Linalool	78-70-6	C10H18O		2.5	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.5	87.6
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		9.7	100.0
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		1.4	86.2
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		9.9	100.0
66	82 Benzyl acetate	140-11-4	C9H10O2		0.2	100.0
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		7.5	100.0
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		5.5	100.0
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		4737.0	99.9
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -Terpineol	10482-56-1	C10H18O		136.7	100.0
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 $\gamma$ -Heptalactone	105-21-5	C7H12O2		0.3	100.0
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		0.5	100.0
82	104 trans-Geraniol	106-24-1	C10H18O		0.9	100.0
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		0.9	100.0
85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		0.7	100.0

87	109 Menthyl Acetate	16409-45-3	C12H22O2		2.5	100.0
88	110 Benzaldehyde PG acetal	2568-25-4	C10H12O2		0.7	100.0
89	111 Citral	5392-40-5	C10H16O		8.2	100.0
90	112 Ethyl salicylate	118-61-6	C9H10O3	ND	NA	
91	113 Piperitone	89-81-6	C10H16O		1.0	100.0
92	114 p-Anisaldehyde	123-11-5	C8H8O2		1.7	93.5
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		0.8	100.0
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 $\gamma$ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2		1.8	100.0
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		6219.7	99.8
100	125 Geraniol Acetate	105-87-3	C12H20O2		2.2	100.0
101	127 Ethyl decanoate	110-38-3	C12H24O2	ND	NA	
102	129 Eugenol	97-53-0	C10H12O2		0.7	100.0
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24		5.9	100.0
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24		0.6	100.0
117	149 Vanillin	121-33-5	C8H8O3		2.6	58.4
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- $\beta$ -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		1.8	55.2
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 $\gamma$ -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 Isosafro Eugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -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 $\delta$ -Dodecalactone	713-95-1	C12H22O2		0.6	100.0
137	175 Benzyl Benzoate	120-51-4	C14H12O2		0.4	100.0
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	Winston Extreme Mint	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.895	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		2.0	100.0
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		0.4	100.0
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		1.2	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.8	82.6
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		0.8	78.2
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.4	100.0
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 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		2.7	77.2
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2		0.2	100.0
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		0.3	100.0
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.2	68.8
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		2.1	77.8
64	79 $\beta$ -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		3.5	77.1
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		1.0	61.7
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		9716.7	68.5
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -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		0.4	100.0
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		1.6	64.4
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 $\gamma$ -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		9768.8	99.5
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		1.3	20.5
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- $\beta$ -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		0.4	0.0
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 $\gamma$ -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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -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 $\delta$ -Dodecalactone	713-95-1	C12H22O2		0.6	100.0
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	Mevius Wind Blue	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.812	
#	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		0.4	100.0
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		0.3	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.1	100.0
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		2.4	100.0
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 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		5.2	94.0
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2		0.1	100.0
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		0.5	100.0
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		0.6	100.0
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		0.3	100.0
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		1.2	63.9
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -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 $\gamma$ -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		7087.2 100.0
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -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)- $\beta$ -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 $\gamma$ -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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA
130	167 $\gamma$ -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 $\delta$ -Dodecalactone	713-95-1	C12H22O2		1.6	46.5
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	Esse Pop	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.531	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.7	100.0
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		14.7	100.0
10	14	Hexanal	66-25-1	C6H12O	ND		NA
11	15	Butyl Acetate	123-86-4	C6H12O2		0.7	100.0
12	16	Ethyl lactate	97-64-3	C5H10O3	ND		NA
13	17	Ethyl 2-methylbutanoate	7452-79-1	C7H14O2		24.2	100.0
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.5	100.0
16	20	Isoamyl Acetate	123-92-2	C7H14O2		19.2	100.0
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		4.4	100.0
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O		3.4	100.0
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O		10.4	100.0
21	25	Furfuryl alcohol	98-00-0	C5H6O2		0.9	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.5	100.0
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		2.7	100.0
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		4.4	100.0
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		12.5	100.0
31	38	Benzaldehyde	100-52-7	C7H6O		0.4	100.0
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		21.8	100.0
36	45	1,4-Cineol	470-67-7	C10H18O	ND		NA
37	46	Limonene	138-86-3	C10H16		9.6	100.0
38	47	p-Cymene	99-87-6	C10H14		2.1	100.0

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		34.4	100.0
41	50 $\gamma$ -Terpinene	99-85-4	C10H16		0.2	100.0
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		2.3	100.0
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		1.2	83.5
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		0.1	100.0
52	64 Amyl Isovalerate	25415-62-7	C10H20O2		0.1	100.0
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.3	100.0
55	68 Linalool	78-70-6	C10H18O		1.3	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.0	80.1
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		0.9	82.7
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		7.5	100.0
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.1	100.0
68	85 p-Menthone	10458-14-7	C10H18O		224.7	100.0
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		28.2	100.0
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		56.3	100.0
73	90 Menthol	15356-70-4	C10H20O		4401.6	100.0
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -Terpineol	10482-56-1	C10H18O		2.5	100.0
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 $\gamma$ -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 Benzenoacetic acid, ethyl ester	101-97-3	C10H12O2	ND	NA	
82	104 trans-Geraniol	106-24-1	C10H18O		0.6	100.0
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		5.9	100.0

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		46.7	100.0
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		4.7	100.0
92	114 p-Anisaldehyde	123-11-5	C8H8O2		0.2	100.0
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O	ND	NA	
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 $\gamma$ -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		5019.3	99.6
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		0.2	100.0
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24		6.4	100.0
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O		1.0	100.0
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24		0.4	100.0
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)- $\beta$ -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 $\gamma$ -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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -Undecalactone	104-67-6	C11H20O2		0.5	100.0

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 $\delta$ -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	Mevius Sky Blue	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.855	
#	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		0.3	100.0
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		0.4	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.1	100.0
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		2.0	100.0
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 $\gamma$ -Pentalactone	108-29-2	C5H8O2		1.2	100.0
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		9.2	90.7
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		0.4	70.5
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		0.7	77.8
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		0.2	100.0
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		1.0	65.3
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -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 $\gamma$ -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		7197.3 100.0
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -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)- $\beta$ -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 $\gamma$ -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 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA
129	165 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA
130	167 $\gamma$ -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 $\delta$ -Dodecalactone	713-95-1	C12H22O2		3.8	16.1
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	Bohem Mojito Double	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.877	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		3.1	100.0
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		0.8	100.0
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		0.2	100.0
14	18	Ethyl Isovalerate	108-64-5	C7H14O2	ND		NA
15	19	Furfural	98-01-1	C5H4O2		0.7	100.0
16	20	Isoamyl Acetate	123-92-2	C7H14O2		0.6	100.0
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2	ND		NA
18	22	(3Z)-3-Hexen-1-ol	928-96-1	C6H12O		2.5	100.0
19	23	2-Hexen-1-ol, (E)-	928-95-0	C6H12O	ND		NA
20	24	1-Hexanol	111-27-3	C6H14O		0.5	100.0
21	25	Furfuryl alcohol	98-00-0	C5H6O2		2.5	85.9
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.6	88.8
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		20.2	97.2
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		65.4	95.8
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		0.9	85.8
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.9	100.0
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		25.8	88.7
37	46	Limonene	138-86-3	C10H16		642.8	96.5
38	47	p-Cymene	99-87-6	C10H14		111.4	94.2

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		18.4	86.7
41	50 $\gamma$ -Terpinene	99-85-4	C10H16		60.2	98.3
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		3.0	87.2
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		0.6	100.0
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		0.2	100.0
55	68 Linalool	78-70-6	C10H18O		5.0	88.5
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.8	88.7
57	70 p-Tolualdehyde	104-87-0	C8H8O	ND	NA	
58	71 Guaiacol (2-methoxyphenol)	90-05-1	C7H8O2		0.2	100.0
59	74 cis-Limonene oxide	13837-75-7	C10H16O	ND	NA	
60	75 Fenchol	1632-73-1	C10H18O		19.3	88.9
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		2.5	88.7
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		26.8	89.9
66	82 Benzyl acetate	140-11-4	C9H10O2		0.2	100.0
67	83 Ethyl octanoate	106-32-1	C10H20O2		1.2	100.0
68	85 p-Menthone	10458-14-7	C10H18O		13.8	90.6
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		12.8	88.0
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		35.8	100.0
73	90 Menthol	15356-70-4	C10H20O		12209.7	86.7
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -Terpineol	10482-56-1	C10H18O		287.8	91.9
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 $\gamma$ -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		0.3	100.0
82	104 trans-Geraniol	106-24-1	C10H18O		1.7	100.0
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		0.8	100.0

85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		2.0	100.0
87	109 Menthyl Acetate	16409-45-3	C12H22O2		18.8	78.6
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		1.0	100.0
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		0.3	100.0
95	118 $\gamma$ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2		2.0	100.0
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		8594.3	99.9
100	125 Geraniol Acetate	105-87-3	C12H20O2		3.9	100.0
101	127 Ethyl decanoate	110-38-3	C12H24O2		0.8	100.0
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		0.2	100.0
107	135 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24		7.0	77.2
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24		1.1	70.1
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)- $\beta$ -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		0.5	100.0
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 $\gamma$ -Decalactone	706-14-9	C10H18O2		0.3	100.0
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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -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 $\delta$ -Dodecalactone	713-95-1	C12H22O2	ND	NA	
137	175 Benzyl Benzoate	120-51-4	C14H12O2		0.6	100.0
138	176 Benzyl Benzeneacetate	102-16-9	C15H14O2	ND	NA	
139	178 Caffeine	58-08-2	C8H10N4O2		0.4	0.0
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 White	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.754	
#	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		0.7	100.0
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16	ND		NA
25	30	2,3-dimethylpyrazine	5910-89-4	C6H8N2		0.3	100.0
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		0.2	100.0
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		0.1	100.0
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		0.2	100.0
38	47	p-Cymene	99-87-6	C10H14	ND		NA

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		12.9	97.0
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2		0.2	100.0
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		0.3	100.0
55	68 Linalool	78-70-6	C10H18O		0.2	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.8	100.0
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		1.1	100.0
64	79 $\beta$ -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		8.7	89.0
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -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		1.5	100.0
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 $\gamma$ -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		6484.7 100.0
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -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)- $\beta$ -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 $\gamma$ -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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA
130	167 $\gamma$ -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 $\delta$ -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	Winston Intense Mint	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.900	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		3.0	63.4
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		0.5	100.0
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		0.9	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.8	83.5
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		0.7	100.0
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.3	100.0
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 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		2.6	74.6
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2		0.2	100.0
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		0.3	100.0
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.1	70.9
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		2.2	74.0
64	79 $\beta$ -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		3.6	78.9
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		0.9	63.1
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		14.0	100.0
73	90 Menthol	15356-70-4	C10H20O		9792.9	69.2
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -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		0.4	100.0
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		1.9	63.7
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 $\gamma$ -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		9666.4	99.6
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -Ionone	127-41-3	C13H20O	ND	NA	
114	144 Ethyl anthranilate	87-25-2	C9H11NO2		0.7	0.0
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 $\alpha$ -Caryophyllene ( $\alpha$ -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)- $\beta$ -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 $\gamma$ -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 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -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 $\delta$ -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	Winston Purple Mint	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.856	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.1	100.0
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		313.3	99.7
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		71.3	99.5
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		21.8	100.0
15	19	Furfural	98-01-1	C5H4O2		0.4	100.0
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		1.0	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.7	80.6
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		2.5	100.0
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		0.5	100.0
28	35	β-Pinene	127-91-3	C10H16		1.5	100.0
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		79.6	99.7
31	38	Benzaldehyde	100-52-7	C7H6O		0.7	100.0
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.4	100.0
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		0.2	100.0
37	46	Limonene	138-86-3	C10H16		4.2	100.0
38	47	p-Cymene	99-87-6	C10H14		0.7	100.0

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		1.9	100.0
41	50 $\gamma$ -Terpinene	99-85-4	C10H16		0.9	100.0
42	51 Dimethyl butanedioate	106-65-0	C6H10O4		0.5	100.0
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		2.9	79.1
48	59 2,3,5,6-Tetramethylpyrazine	1124-11-4	C8H12N2		0.2	100.0
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		0.2	100.0
55	68 Linalool	78-70-6	C10H18O		12.0	81.6
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.5	82.7
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		2.1	78.1
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		13.5	79.9
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.1	100.0
68	85 p-Menthone	10458-14-7	C10H18O		7.4	82.5
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		8.5	71.1
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		13.3	100.0
73	90 Menthol	15356-70-4	C10H20O		9481.4	73.9
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -Terpineol	10482-56-1	C10H18O		1.9	100.0
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 $\gamma$ -Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linalyl acetate	115-95-7	C12H20O2		8.6	100.0
80	101 Ethyl Maltol	4940-11-8	C7H8O3		14.0	100.0
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.4	100.0
82	104 trans-Geraniol	106-24-1	C10H18O		5.3	100.0
83	105 Benzyl Propionate	122-63-4	C10H12O2		28.6	100.0
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		3.9	70.0
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		9.0	88.5
91	113 Piperitone	89-81-6	C10H16O		0.5	100.0
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		27.4	100.0
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 $\gamma$ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2		0.3	100.0
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		8190.8	99.4
100	125 Geraniol Acetate	105-87-3	C12H20O2		1.6	100.0
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		0.2	100.0
107	135 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24		0.6	100.0
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -Ionone	127-41-3	C13H20O		0.2	100.0
114	144 Ethyl anthranilate	87-25-2	C9H11NO2	ND	NA	
115	147 Hydrocoumarin	119-84-6	C9H8O2	ND	NA	
116	148 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		24.6	100.0
118	150 Ethyl Cinnamate	103-36-6	C11H12O2		0.6	100.0
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- $\beta$ -Ionone	79-77-6	C13H20O		19.3	100.0
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		0.8	100.0
124	158 $\gamma$ -Decalactone	706-14-9	C10H18O2		21.0	100.0
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 $\delta$ -Decalactone	705-86-2	C10H18O2		0.2	100.0
130	167 $\gamma$ -Undecalactone	104-67-6	C11H20O2		16.9	100.0

131	168 Raspberry ketone	5471-51-2	C10H12O2		50.8	100.0
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 $\delta$ -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	Winston Caster with LSS	% in Filter
				Replicate #		2
				Sample Mass (g/cig)		0.822
#	Flavor List #	Compound Name	CAS Number	Formula		
1	2	Ethyl Acetate	141-78-6	C4H8O2		14.4 100.0
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		0.6 100.0
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		0.3 100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND	NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.2 100.0
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		14.2 100.0
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 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		47.4	97.9
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		0.7	74.9
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		0.6	100.0
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		1.9	100.0
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		1.4	58.8
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -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 $\gamma$ -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		5905.0	100.0
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		8.5	10.1
118	150 Ethyl Cinnamate	103-36-6	C11H12O2	ND	NA	
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- $\beta$ -Ionone	79-77-6	C13H20O	ND	NA	
121	155 Ethyl Vanillin	121-32-4	C9H10O3		2.0	11.5
122	156 Coumarin	91-64-5	C9H6O2	ND	NA	
123	157 Myristicin	607-91-0	C11H12O3	ND	NA	
124	158 $\gamma$ -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 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -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 $\delta$ -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			1.3 0.0

## Sample data summary

Concentrations are in µg/cig of sample

ND: not detected

NA: not available

				Cigarette	Marlboro Fusion Purple	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.844	
#	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		32.2	100.0
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		38.3	100.0
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		0.3	100.0
15	19	Furfural	98-01-1	C5H4O2		0.9	100.0
16	20	Isoamyl Acetate	123-92-2	C7H14O2		25.5	100.0
17	21	2-Methylbutyl Acetate	624-41-9	C7H14O2		4.6	100.0
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		1.4	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.5	82.0
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		0.2	100.0
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		0.3	100.0
28	35	β-Pinene	127-91-3	C10H16		0.2	100.0
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		40.9	100.0
31	38	Benzaldehyde	100-52-7	C7H6O		1.0	100.0
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.3	100.0
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		0.3	100.0
36	45	1,4-Cineol	470-67-7	C10H18O	ND		NA
37	46	Limonene	138-86-3	C10H16		5.0	100.0
38	47	p-Cymene	99-87-6	C10H14		0.3	100.0

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		1.4	100.0
41	50 $\gamma$ -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		19.3	100.0
47	57 Benzyl Alcohol	100-51-6	C7H8O		1.9	81.3
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		0.2	100.0
52	64 Amyl Isovalerate	25415-62-7	C10H20O2		0.1	100.0
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2	ND	NA	
54	67 Acetophenone	98-86-2	C8H8O		0.3	100.0
55	68 Linalool	78-70-6	C10H18O		4.8	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.5	82.7
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		7.4	97.0
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		7.7	82.5
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.2	100.0
68	85 p-Menthone	10458-14-7	C10H18O		5.6	90.3
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		5.3	80.8
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		9475.9	82.6
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -Terpineol	10482-56-1	C10H18O		0.6	100.0
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 $\gamma$ -Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linalyl acetate	115-95-7	C12H20O2		6.3	100.0
80	101 Ethyl Maltol	4940-11-8	C7H8O3	ND	NA	
81	103 Benzenecetic acid, ethyl ester	101-97-3	C10H12O2		0.4	100.0
82	104 trans-Geraniol	106-24-1	C10H18O		11.1	100.0
83	105 Benzyl Propionate	122-63-4	C10H12O2	ND	NA	
84	106 Pulegone	89-82-7	C10H16O		0.4	100.0

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		3.0	81.8
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		0.3	100.0
92	114 p-Anisaldehyde	123-11-5	C8H8O2	ND	NA	
93	116 Cinnamaldehyde, (E)-	14371-10-9	C9H8O		37.2	100.0
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 $\gamma$ -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		10135.8	99.4
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		0.3	100.0
107	135 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24		0.8	100.0
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		1.2	100.0
118	150 Ethyl Cinnamate	103-36-6	C11H12O2		19.3	100.0
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- $\beta$ -Ionone	79-77-6	C13H20O		13.6	100.0
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 $\gamma$ -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 Isosafroeuugenol	94-86-0	C11H14O2	ND	NA	
128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 $\delta$ -Decalactone	705-86-2	C10H18O2		2.4	100.0
130	167 $\gamma$ -Undecalactone	104-67-6	C11H20O2		4.0	100.0

131	168 Raspberry ketone	5471-51-2	C10H12O2		23.4	100.0
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 $\delta$ -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 Mega	% in Filter
				Replicate #		2
				Sample Mass (g/cig)		0.837
#	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		0.5 100.0
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		0.7 100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND	NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.4 100.0
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		11.2 100.0
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		14.6 100.0
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		0.4 100.0
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		23.8 100.0
38	47	p-Cymene	99-87-6	C10H14		1.9 100.0

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		59.4	100.0
41	50 $\gamma$ -Terpinene	99-85-4	C10H16		2.0	100.0
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		1.5	71.4
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		0.4	100.0
51	63 Isoamyl Isovalerate	659-70-1	C10H20O2		0.3	100.0
52	64 Amyl Isovalerate	25415-62-7	C10H20O2		0.2	100.0
53	65 trans-Linalool Oxide	23007-29-6 34995-77-2	C10H18O2		0.4	100.0
54	67 Acetophenone	98-86-2	C8H8O	ND	NA	
55	68 Linalool	78-70-6	C10H18O		2.2	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		0.9	67.0
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		0.9	71.8
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		19.5	100.0
66	82 Benzyl acetate	140-11-4	C9H10O2	ND	NA	
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.2	100.0
68	85 p-Menthone	10458-14-7	C10H18O		1089.4	99.9
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		48.9	98.9
71	88 Methyl phenylacetate	101-41-7	C9H10O2	ND	NA	
72	89 4-Terpineol	20126-76-5	C10H18O		96.1	100.0
73	90 Menthol	15356-70-4	C10H20O		18429.7	86.3
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O		0.7	100.0
75	96 $\alpha$ -Terpineol	10482-56-1	C10H18O		6.8	100.0
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3	ND	NA	
78	99 $\gamma$ -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		0.2	100.0
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		12.7	100.0

85	107 Ethyl nonanoate	123-29-5	C11H22O2	ND	NA	
86	108 Carvone	2244-16-8 (6485-40-1)	C10H14O		1.3	100.0
87	109 Menthyl Acetate	16409-45-3	C12H22O2		76.6	99.3
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		7.9	100.0
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		0.3	100.0
95	118 $\gamma$ -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		9251.3	99.4
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		0.4	100.0
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24		32.6	100.0
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24		1.9	100.0
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)- $\beta$ -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 $\gamma$ -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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -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 $\delta$ -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	Mevius Option Duo	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.816	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.5	100.0
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		265.9	99.5
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		60.7	99.2
14	18	Ethyl Isovalerate	108-64-5	C7H14O2		19.0	99.0
15	19	Furfural	98-01-1	C5H4O2		0.7	100.0
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		3.2	84.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.3	100.0
24	29	α-Pinene	80-56-8 (7785-70-8)	C10H16		2.1	95.6
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		1.4	100.0
29	36	Butyl butyrate	109-21-7	C8H16O2	ND		NA
30	37	Ethyl hexanoate	123-66-0	C8H16O2		68.7	99.3
31	38	Benzaldehyde	100-52-7	C7H6O		4.2	92.0
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.5	100.0
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		0.2	100.0
37	46	Limonene	138-86-3	C10H16		3.5	93.2
38	47	p-Cymene	99-87-6	C10H14		0.7	100.0

39	48 $\gamma$ -Pentalactone	108-29-2	C5H8O2	ND	NA	
40	49 Eucalyptol	470-82-6	C10H18O		1.9	100.0
41	50 $\gamma$ -Terpinene	99-85-4	C10H16		0.5	100.0
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		261.9	89.7
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		2.9	100.0
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.9	86.6
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		1.9	84.0
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		13.2	83.6
66	82 Benzyl acetate	140-11-4	C9H10O2		8.3	92.7
67	83 Ethyl octanoate	106-32-1	C10H20O2		0.2	100.0
68	85 p-Menthone	10458-14-7	C10H18O		6.9	83.8
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		7.5	76.2
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		8808.8	77.5
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -Terpineol	10482-56-1	C10H18O		1.8	100.0
76	97 Hexyl 2-Methylbutyrate	10032-15-2	C11H22O2	ND	NA	
77	98 Methyl salicylate	119-36-8	C8H8O3		0.2	100.0
78	99 $\gamma$ -Heptalactone	105-21-5	C7H12O2	ND	NA	
79	100 Linalyl acetate	115-95-7	C12H20O2		8.3	100.0
80	101 Ethyl Maltol	4940-11-8	C7H8O3		21.1	100.0
81	103 Benzeneacetic acid, ethyl ester	101-97-3	C10H12O2		0.4	100.0
82	104 trans-Geraniol	106-24-1	C10H18O		5.7	100.0
83	105 Benzyl Propionate	122-63-4	C10H12O2		31.8	100.0
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		5.4	70.1
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		32.0	100.0
94	117 Thymol	89-83-8	C10H14O	ND	NA	
95	118 $\gamma$ -Octalactone	104-50-7	C8H14O2	ND	NA	
96	120 Nerol acetate	141-12-8	C12H20O2		0.3	100.0
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		7226.7	99.7
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		0.5	100.0
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		15.1	92.8
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2		0.2	100.0
107	135 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24		0.6	100.0
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -Humulene)	6753-98-6	C15H24	ND	NA	
117	149 Vanillin	121-33-5	C8H8O3		36.4	100.0
118	150 Ethyl Cinnamate	103-36-6	C11H12O2		0.6	100.0
119	152 Isopentyl Phenylacetate	102-19-2	C13H18O2	ND	NA	
120	154 (E)- $\beta$ -Ionone	79-77-6	C13H20O		22.9	97.1
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		0.9	100.0
124	158 $\gamma$ -Decalactone	706-14-9	C10H18O2		23.6	100.0
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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -Undecalactone	104-67-6	C11H20O2		24.6	100.0

131	168 Raspberry ketone	5471-51-2	C10H12O2		86.2	100.0
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 $\delta$ -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		0.7	0.0
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 Premium Black	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)		0.876	
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND		NA
2	3	Hydroxyacetone	116-09-6	C3H6O2		1.1	100.0
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		0.4	100.0
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		1.3	100.0
22	26	Amyl Acetate	628-63-7	C7H14O2	ND		NA
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		1.4	87.1
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		0.8	84.9
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.5	100.0
33	41	3-Hexen-1-ol, acetate, (Z)-	3681-71-8	C8H14O2	ND		NA
34	42	2,3,5-Trimethylpyrazine	14667-55-1	C7H10N2		0.1	100.0
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 $\gamma$ -Pentalactone	108-29-2	C5H8O2		0.4	100.0
40	49 Eucalyptol	470-82-6	C10H18O	ND	NA	
41	50 $\gamma$ -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		3.3	83.4
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		0.1	100.0
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		1.2	81.3
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		1.7	81.5
64	79 $\beta$ -Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O	ND	NA	
66	82 Benzyl acetate	140-11-4	C9H10O2		0.2	100.0
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		1.5	47.4
74	94 Estragole (4-allylanisole)	140-67-0	C10H12O	ND	NA	
75	96 $\alpha$ -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 $\gamma$ -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 $\gamma$ -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		10030.8 99.7
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 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA
110	140 Methyl N-methylantranilate	85-91-6	C9H11NO2	ND	NA
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -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)- $\beta$ -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 $\gamma$ -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 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA
130	167 $\gamma$ -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 $\delta$ -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	Dunhill Menthol	% in Filter	
				Replicate #		2	
				Sample Mass (g/cig)	0.766		
#	Flavor List #	Compound Name	CAS Number	Formula			
1	2	Ethyl Acetate	141-78-6	C4H8O2	ND	NA	
2	3	Hydroxyacetone	116-09-6	C3H6O2		2.2	100.0
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		0.6	100.0
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		2.5	84.2
22	26	Amyl Acetate	628-63-7	C7H14O2	ND	NA	
23	27	2,5-dimethylpyrazine	123-32-0	C6H8N2		0.9	83.7
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		0.7	100.0
32	40	6-Methyl-5-heptene-2-one	110-93-0	C8H14O		0.4	100.0
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		0.1	100.0
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		3.6	84.8
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		0.4	100.0
55	68 Linalool	78-70-6	C10H18O	ND	NA	
56	69 2-Acetylpyrrole	1072-83-9	C6H7NO		2.6	84.5
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		2.4	86.7
64	79 β-Citronellal	106-23-0	C10H18O	ND	NA	
65	80 Isopulegol	89-79-2	C10H18O		4.9	74.4
66	82 Benzyl acetate	140-11-4	C9H10O2		0.2	100.0
67	83 Ethyl octanoate	106-32-1	C10H20O2	ND	NA	
68	85 p-Menthone	10458-14-7	C10H18O		3.2	82.1
69	86 Ethyl Benzoate	93-89-0	C9H10O2	ND	NA	
70	87 Neomenthol	2216-52-6	C10H20O		2.3	72.0
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		4042.1	75.9
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		1.7	90.1
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		5.1	66.7
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 $\gamma$ -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		6968.7	99.9
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		0.3	100.0
103	131 Methyl Anthranilate	134-20-3	C8H9NO2	ND	NA	
104	132 Piperonal	120-57-0	C8H6O3		0.4	100.0
105	133 Eugenol methyl ether	93-15-2	C11H14O2	ND	NA	
106	134 Methyl cinnamate	103-26-4	C10H10O2	ND	NA	
107	135 $\alpha$ -Damascone	43052-87-5 (31089-90-4)	C13H20O	ND	NA	
108	138 $\beta$ -Caryophyllene	87-44-5	C15H24	ND	NA	
109	139 $\gamma$ -Nonalactone	104-61-0	C9H16O2	ND	NA	
110	140 Methyl N-methylanthranilate	85-91-6	C9H11NO2	ND	NA	
111	141 $\beta$ -Damascone	85949-43-5 (23726-91-2)	C13H20O	ND	NA	
112	142 Aromadendrene	109119-91-7 (489-39-4)	C15H24	ND	NA	
113	143 $\alpha$ -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 $\alpha$ -Caryophyllene ( $\alpha$ -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)- $\beta$ -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 $\gamma$ -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 Isosafro Eugenol	94-86-0	C11H14O2	ND	NA	

128	164 Ethyl Laurate	106-33-2	C14H28O2	ND	NA	
129	165 $\delta$ -Decalactone	705-86-2	C10H18O2	ND	NA	
130	167 $\gamma$ -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 $\delta$ -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		0.6	0.0
140	179 Benzyl cinnamate	103-41-3	C16H14O2	ND	NA	
141	181 Cyclohexanecarboxamide, N-ethyl-5-methyl (WS-3)	39711-79-0	C13H25NO		0.4	0.0
142	182 Triethyl Citrate	77-93-0	C12H20O7	ND	NA	